The Improvement
of Reading

THE IMPROVEMENT OF READING

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The Improvement of Reading

THIRD EDITION OF
Problems in the Improvement of Reading

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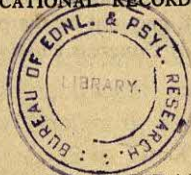UNIVERSITY OF ARIZONA

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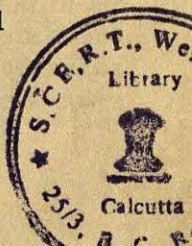EXECUTIVE DIRECTOR
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THE IMPROVEMENT OF READING

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Preface

This book attempts to give a comprehensive, balanced view of the reading problem. In it, theory is fused with practice, and reading is recognized as part of an individual's total development and as an expression of individuality. In many chapters, specific how-to-do-it details of group and individual methods of instruction are given.

An extensive bibliography has been added at the end of each chapter for those students who wish to go more deeply into the research basis for improvement of reading in schools and colleges. For the benefit of teachers, librarians, and administrators, who are naturally more concerned with practical applications, selected books on methods and articles describing reading programs and procedures have been included.

The first edition under the title *Problems in the Improvement of Reading* by Ruth Strang and Florence Rose was published in 1938 and revised in 1940. In 1946 Constance M. McCullough and Arthur E. Traxler were invited to collaborate, and the first edition under this combined authorship was published in that year. The 1955 edition represented a thorough rewriting and enlargement, giving much more detail of procedure. New chapters on the teaching of reading in each subject; on special problems of slow learners and able learners; on the reading curriculum; on reading interests, materials, and equipment; and on personality factors and reading difficulty were added. Chapters 6, 8, 9, and 14 were written primarily by Dr. McCullough, Chapter 13 by Dr. Traxler, and the other fifteen chapters by Dr. Strang.

During the seven years since the second edition of *Problems in the Improvement of Reading* was written, an increasing number of articles and books have been published in this field. There was, therefore, the obvious need to bring the bibliography up to date and to incorporate new points of view and emphases. Among these are the following:

Increased concern for the improvement of reading in junior and senior high school

Personality and character development through reading

The improvement of the reading of all students rather than remedial work with a limited number of individuals

The teaching of higher-level skills such as interpretation of literature and critical reading

Trends in theory and practice with respect to reading

Continuous appraisal of reading achievement and instruction

In this edition, chapters on reading in the content fields were written by Dr. McCullough, the chapter on appraisal through tests by Dr. Traxler, and the other chapters by Dr. Strang.

Grateful acknowledgment is made to the many persons who contributed in various ways to this volume: to Deborah Brink, who not only assisted most competently with the bibliographical work but also read critically the entire manuscript; to Dr. Miriam Benneé and Dr. Amelia Melnik, who also assisted with the bibliographical work; and to many students in Dr. Strang's classes in The Improvement of Reading in High School and College, at Teachers College, Columbia University. Among the students who have contributed descriptions of programs and procedures are Grace Hope Allardice, R. Athelma, Henry S. Bissex, Margaret F. Borton, Helen Carey, Selena C. Clay, Elizabeth Edmonds, Gladys Fisher, Marilyn Graff, William E. Langdon, Georgia Lightfoot, Ethel Madden, Ethylne Phelps, Sally Prentice, M. L. Schroedel, Pauline Stock, Harriet M. Sweetland, Katherine Templeton, Barbara Van Patten, Dorothy M. Webber, Dorothy Withrow, Annetta Wright, and Joseph D. Young. Needless to say, the authors owe much to many other persons who have described present practice and have reported research in the field. References to many of these investigations are listed at the end of each chapter, so that the student who desires more detail may find it in the original article.

Ruth Strang
Constance M. McCullough
Arthur E. Traxler

How to Read This Book

Because this is a practical rather than a theoretical book, it should be approached from the vantage point of the particular experience of each of its readers—from the standpoint of a person who wants to improve his own reading; of a teacher of students who are expected to gain a large proportion of their knowledge through reading; of a parent who is concerned with the success of his children; of an administrator who wants the students in his school to be adequately equipped for the work and the leisure of life; or of a specialist in reading. Whatever your experience has been with reading, you should try to bring it to bear on reading this book.

If you are interested for either personal or professional reasons in making immediate application of this material to the improvement of your own reading, the authors recommend the following procedure, so familiar to experienced teachers but so often neglected even by college and graduate students. Set specific goals for yourself. First, recall your own experience with reading and your unanswered questions and unsolved problems in the field. Only after you have done this are you ready to explore the book. Reading the table of contents will acquaint you in more detail with the general pattern of the book—what topics are covered, what their relation is. These preliminary steps will motivate your reading and give you a basis on which to decide whether to read the whole book or only certain chapters or to look elsewhere for material more directly relevant to your needs.

If you decide to read the book, or at least parts of it, you should be aware of your purpose in doing so. Do you wish to become acquainted with the basic information and concrete suggestions that the book offers, or do you seek the answer to some specific question or problem presented in a single chapter? If the former is your purpose, self-initiated or imposed by the requirements of a college course, you may as well follow the authors' lead and begin with the first chapter.

In either case, before reading a chapter, spend a few minutes formulating what you would have said on the subject if you had been asked to write the chapter. Then take five minutes to skim through the chapter, reading headings and topic sentences here and there to get a general idea of the content of each paragraph and of what the author is trying to do. Ask questions about the topic before you begin to read it.

Now you are ready to read more carefully. Just how you read will be determined by your goal. If you want to learn the authors' point of view on each major topic, so that at the end of each section or chapter you can outline the main pattern of thought, then you will try to find the main idea in each paragraph. If the main idea is particularly important to you, you will want to see just how it has been supported and illustrated. If the main idea is not particularly important or is already familiar to you, you only need to glance at the supporting detail. You will be able to remember these central ideas more easily if you relate each to the previous one so as to build an integrated structure of thought as you read rather than merely a collection of isolated ideas.

As you read, relate ideas in the book to your experience. Get the meaning as you read; anticipate meaning—predict what is coming next. Relate this book to others you have read. Evaluate ideas gained. Read with the intent to remember and apply. Talk about the ideas you have acquired.

More specific suggestions for reading a few of the first chapters may be helpful. Chapter 1 is more technical than the succeeding chapters; it should give you deeper understanding of the complexity of the reading process. Results of research and experience on the relation of reading and other factors are presented; it is up to you to make your own summary and application.

Chapter 2 gives glimpses of present practice. From each description you will get ideas that you can adapt to your own situation. Read with the intent to apply.

Chapter 3 may be read quickly for an overview of the reading problem as a whole. Slow up a little when you come to a section relating to your own position. From the chapter as a whole you will learn about the contribution of each member of the school staff and will know what kind of help you may expect from him.

Chapter 4 focuses on the specific attitude, knowledge, and skills that constitute the reading curriculum and may contribute to personal development. You may well keep in mind this map of values and the landmarks in the child's journey toward maturity in reading.

Similarly, each chapter should be approached with its unique value to you in mind. Because the problems treated in each chapter have common elements, some duplication has been inevitable. To be sure, a certain amount of repetition is desirable for emphasis and for ensuring the retention of important ideas. However, the authors have tried to treat each topic fully when

it is first introduced. By using the index a reader who wants more detailed information on any topic can find the place where the topic is most fully discussed.

While you are reading, various bright ideas may occur to you, sometimes closely related to the subject, sometimes not. Good ideas are at a premium, so do not lose them. Jot down a key word or two to remind yourself of them, and consider them later for what they are worth in your personal or professional life.

With the authors' contribution to the subject and your own ideas clearly before you, you are prepared to make whatever applications seem valuable to you. You have reviewed your previous experience, perhaps enriched it by your reading of the chapter, and are now equipped a little more adequately to meet the next situation involving the improvement of your own or your students' reading.

Each chapter, in fact, should give you a fuller background of experience and a stronger foundation on which to build the ideas that you will gain from reading the next chapter. Thus, chapter by chapter, your understanding of reading should grow and your ability to deal with the practical problems of reading in school or college or in your personal life should increase. Perhaps you will be interested in further reading and study, for this book provides only one gateway to a vast and complex field.

Contents

PART I
READING IN
THE SCHOOL PROGRAM

CHAPTER 1

The Nature of Reading

"I should like to get greater perspective on this problem of reading, to see more clearly its relation to personality development and to the everyday lives of my pupils." Thus a high school teacher expressed his desire to understand the nature of reading and its significance in our lives today. Before we consider programs and procedures, we need to understand the reading process and its ramifications.

VARIOUS VIEWS OF READING

There are many misconceptions of reading. To some people, words are merely a supplement to pictures, an adjunct to television. To others, reading is a passive process—"expecting the book to come to you," as one student said. Many people have been persuaded that reading is synonymous with word calling: if you can pronounce the words correctly, you are reading—even though you have no idea what the author said.

Reading, as we now view it, is more than seeing words clearly, more than pronouncing printed words correctly, more than recognizing the meaning of individual words. Reading requires us to think, feel, and use our imagination. Effective reading is purposeful. The use one makes of his reading largely determines what he reads, why he reads, and how he reads.

Our methods of diagnosing reading difficulty and of teaching reading are influenced by our over-all concept of reading. If we think of reading primarily as a visual task, we will be concerned with the correction of visual defects and the provision of legible reading material. If we think

of reading as word recognition, we will drill on the basic sight vocabulary and word recognition skills. If we think of reading as merely reproducing what the author says, we will direct the student's attention to the literal meaning of the passage and check his comprehension of it. If we think of reading as a thinking process, we shall be concerned with the reader's skill in making interpretations and generalizations, in drawing inferences and conclusions. If we think of reading as contributing to personal development and effecting desirable personality changes, we will provide our students with reading materials that meet their needs and have some application to their lives.

A BROAD VIEW OF READING

Reading is first of all a visual task, except, of course, for the blind, who identify word symbols through the sense of touch. Secondly, reading means learning to identify the sounds of letters in words and to associate the printed word with its meaning. The third essential of the reading process is to understand the meaning of a passage. Comprehension may involve various degrees of thinking, discussed later in this chapter.

There is still another dimension of reading—*reacting and acting*. As one reads he has feelings, mild or intense. He likes or dislikes the selection; he agrees or disagrees with it; he finds it disturbing or reassuring. Feeling tones are interwoven in the reading process. Not only does the reader get ideas—ideas get him. The reader also acts as a result of his reading. Reading is responding. Effective reading is purposeful; it is used in some way—to learn about the nature of the world and of man; to enjoy leisure hours; to communicate with others, in either speaking or writing; to secure information for solving problems; or to discover how to make and do things.

The end result of reading is personal and social development. Teachers should ask the question: What desirable changes has the student's reading produced in his points of view, his attitudes, his feelings, and his behavior? "Growth *through* reading is the ultimate goal of instruction, while growth *in* reading is the means to that end" [7, p. 542].

COMPONENTS OF READING

Many attempts have been made to study the components of reading. Thus far, a perceptual factor, a word factor, an interpretation-of-language factor, a reasoning factor, and a speed factor have been isolated [17]. The perceptual factor seems to be most clearly related to the ability to perceive details. The word, or vocabulary, factor involves fluency in dealing with single words and obviously plays an important part in reading comprehension. The interpretation-of-language factor reflects ability to deal

with the meaning of words in context. The reasoning factor involves the ability to see relations among ideas and to give the proper weight to each element. Lacking this ability, the student tends to memorize rather than analyze. Thorndike's classic analysis of reading as a reasoning process called attention to the fact that the reader must constantly evaluate the relative importance of words, phrases, and sentences as he reads [89].

Lyman described reading, thinking, and studying as three aspects of one process: "We *read* serious books to get ideas; we *think* about them to see what these ideas mean; we *study* ideas and their meanings, endeavoring to make them our permanent possessions and to get ready to use them in problems of our own" [60, p. 14].

Reading as a Visual Task. *Getting a Clear Image.* Seeing printed words is a complicated task. It involves, first of all, visual acuity. Until the age of nine or ten, children tend to be somewhat farsighted—their vision for distant objects is better than for near objects. After this age, the percentage of nearsightedness (myopia) increases. The rate of increase is greatest at the age of puberty [49].

To receive a clear image of the printed word, the eyes must focus on it. The eyes of children younger than four years do not usually have the ability to converge on a certain point; they do not reach the peak of their power of convergence until the child is perhaps fourteen or fifteen years of age. Problems of proper convergence of the eyes do not show up as frequently in tests of distant vision as when individuals are tested at reading distance [26].

Reading also involves fusing the image produced by each eye into a single clear image. This is a neuromuscular skill. Difficulty in fusion results in a blurred image.

The ability to focus on words against the background of the printed page is another aspect of visual perception. Most children are able by five years of age to distinguish specific words and letters when the print is fairly large and the space between the words is ample. From the visual standpoint, children can perceive printed symbols at about five years of age in books with 12-point type. Gifted children, who are usually more mature physically as well as intellectually, may be able to read at an earlier age than the average.

Eye Defects. A child with severe eye defects finds it difficult to see words clearly. As he grows older and is required to read small print, the difficulty increases [96, p. 121]. Muscular imbalance—the inability of the eye muscles to rotate the eyeballs accurately into the best position for getting a clear, unblurred image—is more frequently mentioned as a factor in poor reading than any other eye defect. When the eyes turn inward (*esophoria*) or outward (*exophoria*) too much, the eye muscles must contract more than normal in order to fuse the images from the two eyes. This causes eyestrain and fatigue. For readers who have this difficulty with fusion, orthoptic training of the eye muscles is often helpful.

Farsightedness, or *hyperopia,* is more likely to be associated with reading retardation than nearsightedness, or *myopia.* Jenkins [54] reported that among a group of high school seniors who were studied, the best students, on the average, had better near vision, and the poorer students had better far vision. Farsightedness occurred in 12 per cent of Eames's unselected children and in 43 per cent of the reading failures [26]. Robinson and Huelsman [77, pp. 31–63] found that efficient reading was most highly correlated with depth perception and near acuity. Astigmatism has been found to be associated with reading difficulty.

A less well-known eye defect, *aniseikonia,* which causes the ocular images to be unequal in either size or shape, produces difficulties in fusion. By interfering with the ability to fuse, aniseikonia may cause either ocular or general fatigue. By interfering with the peripheral view of the line of print, it may decrease the span of recognition.

Another eye defect, called *aniseidominance,* may result when the person has better vision in one eye than in the other. He may see one image as brighter and nearer than the other. This defect might have somewhat the same effect on reading as does aniseikonia.

In a study based on 3,500 cases, including reading failures and unselected school children, with ages ranging from five to seventeen years, Eames [26] summarized the many causes of inefficient vision. He recognized neurological conditions and diseases of the eyes, as well as defects that may be corrected by glasses or surgical treatment or eye exercises; defects that reduce sharpness and clarity of vision and those that fall within the normal range but may cause difficulty in children learning to read, or fatigue and discomfort in older students.

Defects of hearing, nutritional and endocrine disturbance, and other physical conditions may similarly be related in subtle ways to reading development. These factors will be discussed later in the chapter on diagnosis.

Effect of Defects on Reading. Evidence conflicts on the relation between reading performance and visual defects. The interrelationship between the two is difficult to demonstrate. There are several explanations for this:

1. Individuals vary in their sensitivity: a small defect that does not bother one person may block another in his efforts to read [26, p. 4].

2. Some individuals are more highly motivated than others; they learn to read despite visual defects.

3. A student may transcend the limitations of his visual handicaps during a test, but not for longer periods of study.

4. Certain visual factors that are closely related to reading may not yet have been completely defined; existing instruments may not measure them.

5. Most studies have considered only separate factors rather than patterns or syndromes of visual defects.

6. A certain amount of eye incoordination may be "the effect rather than the cause of poor reading" [96, p. 121].

Any visual defect may cause dissatisfaction, discomfort, and disinclination to read. Therefore, a visual screening test should always be included in any study of an individual's reading (see Chapter 14).

Although visual difficulties may inhibit learning, freedom from them does not necessarily stimulate successful learning. Correction of visual difficulties is not enough to ensure improvement in reading; it only makes it possible for the student to learn to read. There still remains the task of teaching him to read.

Lateral Dominance. The long-standing left-handed or "mixed-dominance" controversy has aroused much popular interest. A person with *strephosymbolia,* which merely means "twisted symbols," sees certain words and letters reversed or upside down, or both; *was* seen as *saw* and *b* read as *d* are classic examples. He may also transpose letters within a word, as *stop* for *spot,* or words within a sentence [3, p. 1].

Left-eyedness with right-handedness, according to Eames [26], is "probably the most common and presumably the most troublesome" disturbance of lateral dominance. It occurs in both reading failures and nonfailures, but with 10 per cent greater frequency in cases of reading difficulty.

Most first-grade children occasionally read and write letters and words backward or upside down. They look at words as they look at pictures, where a left-to-right movement is not necessary. These inaccuracies in perception "seem to die out naturally as the child matures" [97, p. 549]. Teaching the initial consonants helps to start a child reading in the right direction, whereas teaching by the whole-word method or drilling on the final phonograms in word families may encourage reversals.

If, despite careful teaching of the left-right direction, the tendency to reversals persists into the second and third grades, it may indicate a deficiency in the child's "powers of reasoning about words" [97, p. 549], or a neurological immaturity in which neither side of the brain has become clearly dominant in controlling the perception of symbols. Mixed dominance is reported frequently among serious reading cases referred to clinics. "The problem is not one of vision, but of recognition and recall" [3, p. 1].

From studies of the relation of hand and eye preference among good and poor readers, Anderson concluded that "it does not appear that mixed dominance is a factor of any great importance in reading disability. Even more uncertain is the evidence linking errors of reversal to mixed dominance. Fortunately, the reversal problem can be understood without involving any assumption about brain physiology" [3, p. 2]. After a careful review of experimental studies, Vernon concluded that "the relationship to reading disability of incomplete lateralization and cerebral dominance is extremely obscure" [96, p. 115].

Eye Movements and Visual Perception. The relation of eye movements to reading efficiency has been extensively studied, but fewer studies have

been made from 1945 to 1957 than in previous decades. According to Tinker, "the eye-movement approach to the study of the reading process has probably made its major contributions" [90, p. 229].

Study of Eye Movements. Photographic records of eye movements show that the eyes do not move smoothly from left to right across the line of print; they move in a series of stops (fixation pauses) and starts. The fixation pauses total about 94 per cent of the reading time, and, according to Gilbert [36], their duration does not change much throughout the elementary and high school years. It is during these fixations that word perception occurs [91].

Sometimes the eyes move backward over the line. Such regressive movements seem to occur when (1) the reader's thought is blocked by an unfamiliar word; (2) he needs to reexamine the sentence to understand it better or to relate it to other ideas in the passage; (3) his perception of successive words is inadequate; (4) he picks up the wrong clues the first time; or (5) his eyes move more quickly than his thoughts. Regressions often occur near the beginning of a line when the return sweep of the eye is too short to take in all the first words.

Eye Movements of Good Readers. In general, good readers show fewer fixation pauses and regressions and greater flexibility in eye movements than do poor readers. In reading material that is relatively easy for them, they usually make consistent progress from left to right, without regressions and with few and short fixation pauses [91, p. 576]. More difficult material is read with more fixations. Erratic eye movements that show frequent pauses and regressions are usually symptoms of inefficient habits of perceiving and comprehending.

Photographic records of eye movements require skillful interpretation. A good reader who is intently trying to comprehend the author's thought in a difficult passage or to remember all the important details may pause frequently on each line and occasionally go back over the line. His eye movements tend to be irregular, though not erratic or inconsistent. Properly interpreted, eye movements may give some indications of the ways in which the mind and the eyes work while the person is reading.

Development of Eye Movements. With age, eye movements become more efficient. The most rapid growth is during the first four grades. Seventh-grade pupils read both easy and difficult material with greater efficiency than fifth graders, but the eye movements of college students were found to be "only slightly more mature than for ninth grade pupils" [90, p. 221]. Despite marked individual differences in rates of growth, older students, in general, would probably show greater improvement if they received more effective instruction in reading [91, p. 578].

Effective instuction in reading improves eye movements without the necessity of resorting to special eye-training or pacing exercises. Although the various instruments for eye-movement training seem to be useful for

motivation, it has not been demonstrated that they have any special worth for the permanent improvement of reading [93].

Visual Perception. There is more to visual perception than eye movements. Adequate visual perception of sentences involves (1) the ability to identify whole words by configuration, outstanding letters, initial syllables, or the irregular upper half or skyline of words; (2) the skill to recognize simultaneously both the outline and the details of the word in relation to each other; and (3) the ability to focus on key words in four to six fixations per line, while simultaneously using context to infer the whole meaning of contiguous phrases from the few words thus clearly perceived. This is no simple task; it requires prolonged practice [98]. Perception is a process that makes present visual impressions meaningful in the light of past experience and in accord with emotional needs.

The effective reader makes use of peripheral vision, which enables him to take in more than the three words of about five letters each which constitute the physical limit of a single eye span. He recognizes additional words on either side by their shape, familiar letter groups, distinctive letters, or other clues [100]. According to Hollingworth's theory of reading as clue reduction [50], efficient readers require fewer clues to recognize words or phrases than do poor readers.

Relation to Speed of Comprehension. A person can see words more rapidly than he can comprehend their meaning; it takes time to organize one's perception and see the relations between words. Theoretically one could take in a line from a newspaper column in a single eye span, but actually this does not often happen. Many high school and college students do not read their textbooks at more than 250 words per minute. And, contrary to some popular articles on speed reading, the anatomical and physiological limits of perception would make it impossible to read more than 1,451 words per minute or to grasp the meaning of a page or paragraph with a single quick glance [100]. Any rate of reading "above 800 words per minute can only mean that the reader is skimming, rather than reading all the material. Even with easy material 500 words per minute is very fast reading" [90, p. 219].

It is desirable to make a distinction between *speed of reading,* to which there is a definite physiological limit (plus the intellectual limit of comprehension) and the *speed of skimming,* which is determined much more by the skill of finding what one is looking for than by physical factors.

The degree to which an individual realizes his perceptual limits depends on his mental ability, vocabulary, reading habits, familiarity with the field in which he is reading, and other factors. We should, however, recognize that reading is not without physiological as well as intellectual hurdles to surmount.

Associating the Sound with the Printed Symbol. Children may learn to read by being told the meaning of words on labels, by being shown

printed words for objects or illustrations of objects, or by receiving practice in carrying out printed directions such as *run, jump, get a book*. But it is not easy to recognize and remember words merely by their shape or the sequence of the letters in them. Children often guess wrong. There comes a time when they need to learn new words by sounding them out. This, too, is no easy task.

To sound out printed words, the child must recognize the shapes of letters, and the shape of each word as determined by the order of its letters. He must similarly recognize the sound pattern of each word, which consists of phonetic units combined in various ways. Then, to pronounce the word, he must associate and blend the phonetic units with the letter symbols in the correct order. If his pronunciation is correct and the word is in his speaking vocabulary, he will then know its meaning. Obviously, this process requires a certain degree of intelligence.

There are various approaches and methods for teaching children to sound and pronounce words. Hildreth [47, 48] characterizes the traditional method as "synthetic" and the newer method as "analytic" or "intrinsic." In the synthetic method, the approach is to build up words from their parts, whereas in the analytic method whole words are broken into recurring parts.

It is both logical and psychologically sound to begin with interesting words that the children are already using in their speaking vocabulary. Thus each new sound is first encountered in a familiar word. In many instances, especially in the case of vowels, the sound is modified by the adjacent letters. The steps in the whole-word analytic method are—

1. To learn fifty or more common words as wholes in connection with experience stories
2. To identify certain sounds with certain parts of these words
3. To recognize these sounds in other words
4. To generalize about sounds and make pronunciation rules [48, p. 338]

The experienced reader, however, does not slow down his reading by sounding the words as he reads—although slight movements of the vocal chords, especially on key words, may accompany apparently silent reading. The degree to which the reader uses vocalization may be related to the method by which he initially learned to read; too much emphasis on phonics and on oral reading may establish a lifelong habit of sounding words in order to get their meaning.

Recognition of Word Meaning. Sounding out a word will give the reader its meaning if the word is in his speaking vocabulary. But if the spoken word is unfamiliar, he will have to use other ways of unlocking its meaning. For example—

1. Deriving the meaning from the context. In doing this, the reader may guess right as much as one-third of the time [62].

2. Studying the form and structure of the word to get clues from familiar parts.

3. Asking someone who knows the meaning.

4. Looking it up in the dictionary. We must remember, however, that the dictionary definition is not the final answer. The reader must select from a range of meanings the one that fits the context. Richards [74] has observed that words, when looked at closely, are never the same for two readers. The interpretation of a sentence, a paragraph, or a literary selection often hinges on the interpretation of a pivotal word.

Interpretation of words is personal. For example, a sixth-grade teacher whose pupils learned a number of new words far better than the children in three other sixth-grade classes used imagination and personal reference in her instruction [28]. In teaching the word *tussle,* this teacher dramatized the word by having two boys engage in a tussle in front of the class. In teaching the word *protrude,* she pointed out the small word *rude* and placed it in the sentence "It is rude to stick out your tongue at someone." In the word *disconsolate* she called attention to the small words, *so late* and said, "If you come to school *so late,* you are sad or disconsolate." The word that was learned best by all four classes was *scowl,* which the teachers illustrated by scowling or by calling attention to scowls on the children's faces. The word *confiscate* was the one most easily learned by the class with an average IQ of 92, whose teacher frequently spoke of confiscating articles such as pogo sticks, water pistols, cap pistols, and Yo-yos, which the children were forbidden to bring to school. Underlying these devices, some of which are questionable—such as finding small words in larger words—is the principle of personalized learning, associating the word to be learned with something interesting and meaningful in the life of the child.

Reading as Interpretation of Meaning. Semantics—the science of meaning—stems from experience. General semantics has been defined as "the study of word-fact relations." [1] Language is what we say about experience.

A word can never completely define an object, action, or event. All writing and speech are to some extent abstractions; we never say all. The further removed a word is from its plain sense meaning, the more is left unsaid. For example, to say, "There is a fire," conveys a definite meaning to the person who is sharing the experience of looking at a pile of burning leaves. To say, "I like to sit by the fire," is somewhat indefinite, for the hearer does not know whether the speaker likes to sit by an open fireplace, a stove, or a campfire. If we say, "Life is a pure flame," we are referring to some unspecified quality of fire, and the remark requires a complex process of interpretation. Metaphors and other figures of speech are not confined to poetry; we use them freely in everyday speech and writing. In a list of articles in an issue of the *Reader's Digest* one finds the following

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[1] The authors are especially indebted for many of the ideas in this section to M. Kendig of the Institute of General Semantics, and to the writings of Stuart Chase, Louis Zahner, I. A. Richards, and S. P. Hayakawa.

titles: "Floodlighting the Job Market," "New Strength for the Staff of Life," "Stamping Out Starvation," and "Hollywood's New Ghost Voice." In all of these instances, the common meaning of a word or phrase is replaced by a special or partial meaning. If words referred only to physical objects and their movement in space, their meanings would be clear and uniform; however, human communication is seldom conducted on this simple level.

Words have a wide range of meaning. They wander about within the limits set for them by dictionary definitions. For many words these limits are extensive. For instance, *Webster's New International Dictionary* gives 16 meanings for *book,* 29 meanings for *dust,* and 36 meanings for *shade.* The *Unabridged Oxford Dictionary* gives as many as 150 meanings for a single word. Even the dictionary does not include all variations of meaning that are in current usage. Moreover, some words like *force, mass,* and *work* have both a general meaning in common usage and a technical meaning. These words and, in fact, many words get their peculiar meaning from the context. Consider what is done to the word *dog* by putting *hot* in front of it.

Most uncharted of all are such words as *peace, democracy, justice, meaning, cause,* and *true.* These and others like them describe the very structure of society, thought, and feeling. For each individual who utters or hears one of these words, it has a different significance, depending on his personal experience. Zahner emphasized the importance of realizing "how individual a thing a word as a symbol often is," and Richards warned against any study of words that leaves students with the impression that a word has only one definite meaning.

The task of interpretation of meaning is made still more complex by the fact that words are constantly changing their meanings. For example, the word *women,* referring to women in 1911, is not the same as *women,* referring to them in 1961, for the status and interests of women have markedly changed during the last fifty years. In making an accurate interpretation of the meaning of a passage, one must take into account time and place, the author's intent and purpose, and other factors. To recognize and practice the methods of general semantics is a requirement for anyone who would acquire the fine art of reading.

Comprehension. There are many levels of comprehension. On the higher levels, reading involves getting the meaning from the printed page by bringing to bear on it our experience and background.

Reproduction and Translation. Reading the lines, reproducing the author's words is merely parroting. To translate the author's thought into one's own words is more difficult. An accurate comprehension of the author's thought requires an understanding of the structure of language. Grammar and punctuation are an aid, not only to writing, but also to comprehension. In reading one has constant opportunities to observe sentence

structure in relation to sentence meaning, and to use punctuation and grammar to facilitate the grasp of meaning [16].

The teacher assists students toward a more adequate literal comprehension of the author's thought by asking questions: What is the title of this article (or chapter)? What does this key word mean? What is the meaning of this word in this context? How is this sentence built? What is the relation of this sentence to the ones that precede and follow it? All reading involves some degree of thinking, though, at this level of comprehension, it cannot be called reflective thinking.

Although errors in reproducing or translating the author's thought can sometimes be attributed to faulty vision and word recognition, they can more often be explained in other ways. The reader may lack sufficient interest or desire to be precise and accurate. Sometimes he is deflected from the author's meaning by his own attitudes and emotions. Often he misses the point because he is too indifferent to look up a key word or puzzle out its meaning. Very often, he has not had the sort of experience that would give meaning to what he reads.

Interpretation and Critical Reading [52]. This involves grasping implied meanings or reading between the lines. Whether or not the reader brings meaning to the printed word depends on his background of experience, his purpose in reading, his attitudes and points of view, and his mental ability. Unless the reader has had appropriate firsthand experiences or possesses vivid impressions gained from previous reading or from pictures or recordings, the words will not arouse visual, auditory, or motor images. In reading fiction or biography, this imagery, when appropriate, enables the reader to feel with the characters and to interpret the situations in which they are involved.

In an environment permeated with propaganda, one must use critical reading as a tool to maintain one's integrity—to avoid being used as a means to other people's ends. This necessity to defend oneself from insidious influences is illustrated by the young girl who said to the librarian: "I want a book on psychology. Somebody's trying to use it on me and I want to know how to combat it."

Critical reading involves the examination of ideas. Students should examine a sweeping generalization, state it in their own words, note the evidence offered in support of it, check it against their own experience and information, and finally give their considered appraisal of the statement. Teachers, especially those above the elementary level, might well introduce the study of semantics and logic. At least, they should teach students to be alert to the fallacies that may occur in language and thought.

Reading is a thinking process, and thinking requires effort. The reader cannot sit passively and expect the meaning to come to him. As someone has said, "the poet writes verse; the reader translates it into poetry."

In this respect, reading differs from watching television. In the latter medium, most of the thinking has been done by the producer, whose aim is to entertain. Entertainment encourages passivity. Books encourage one to stop and think. The reader can consider all sides of a question, enjoy an idea as it is presented, compare, question, reconsider. He can reread, if necessary, to confirm his understanding of relationships he has only vaguely sensed. He can delve more deeply into the meaning.

Arranging the Author's Ideas into New Patterns. This requires that we assemble unconnected parts into meaningful wholes, as when we make a synthesis of the ideas we have gained from reading.

In teaching reading, we have to combat a trend of the times to "take things easy." Many teen-agers spend their leisure time reading comic books, picture magazines, and newspapers that are geared to immature minds, or letting television trivia flow in and out of their heads.

Making Inferences and Generalizations and Drawing Conclusions— "Reading beyond the Lines." To develop these reading skills, one must grasp the author's pattern of thought as a whole, note relationships among the details, and check the ideas against one's own experience and information. This is a mature ability.

The interest in analyzing one's own thoughts, thinking beyond the present, and building systems and constructing theories develops most markedly during adolescence. Then the student has become capable of reflective thinking. "He feels he has to work out a conception of life which gives him opportunity to assert himself and to create something new" [53, p. 342]. He is not satisfied with piling one bit of information on top of another; he relates concrete facts to ideals of humanity, social justice, courage.

This kind of reading contributes directly to personality development. It is evoked by real problems to be solved and by such questions as these: What is the author trying to say about being grown up or mature? Taking everything into consideration, what do you think Jack should have done? In Shakespeare's King Lear, which of the three sisters really loved her father? How do you know?

Inferences are not limited to deductions from concrete situations. More abstract inferences require a consideration of possibilities and hypotheses, as well as deductive reasoning [53, p. 16]; they are concerned with creating a "structured whole." The following analysis of a paragraph illustrates the kind of practice in logical thinking that mature high school and college students need. The paragraph presented was this:

At the present time the Republic of France maintains 500,000 troops in Africa, at tremendous national expense. The monetary value of her imports is less than that of her exports. French citizens are said to evade paying their taxes. Because it is well-known that economic instability precedes economic depression, we must conclude that France is on the verge of disaster.

Analysis of the Paragraph.[2] The conclusion of the deductive argument is stated in the independent clause of the last sentence, with the word *disaster* referring clearly to the economic depression. The major premise is stated in the dependent clause, "economic instability precedes economic depression." The author uses two propaganda devices to ensure acceptance of the major premise: (1) deemphasizing it by putting it in a dependent clause, and (2) appealing to the weight of public opinion by the words "it is well-known that." Such devices should be detected by the reader appraising the argument. The minor term of the syllogism, "France is undergoing a period of economic instability," is unstated. If the reader accepts the evidence in the first three sentences, he is likely to accept the unstated minor premise but should realize that it is he and not the author who is stating it.

The Speed Factor in Comprehension. The speed factor in reading is of special interest because so many poor readers think of "slow rate" as their chief difficulty. As a matter of fact, many students read some kinds of books too fast and other kinds too slowly. Fadiman reminds us that we should adjust our speed to the kind of material we are reading: [3]

> Now, I do not believe dogmatically either in fast or slow reading. I believe tripe should be read practically with the speed of light and, let us say, Toynbee's *A Study of History* with tortoise deliberation. And most books are nearer to tripe than they are to Toynbee. But the trouble with practically all of us is that we suffer from chronic reverence. We make the unwarranted assumption that because a man is in print he has something to say, and, acting on this assumption, we read his every word with scrupulous care. This may be good manners, but it's a confounded waste of time [30, pp. xlii–xliii].

All students could increase their general reading efficiency if they were taught to vary their speed according to their purpose and the nature and difficulty of the material. Letson concluded that college freshmen tend to maintain a given rate regardless of the difficulty of the material. He also found that the difficulty of material exerts greater influence on rate than the two different purposes set by the experimenter [59].

The relation between rate and comprehension is still undetermined. Coefficients of correlation between these two factors vary from —.47 to .92. This relation depends in large part on the measures used [58]. Some of the highest correlations were obtained with easy material or when one score was dependent on the other. Some of the lower correlations were obtained with difficult material, or when speed was measured on one kind of material and comprehension on another. Letson [58] found the relation between

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[2] Contributed by Capt. Philo A. Hutcheson. See also article "Secondary School Reading as Thinking," *The Reading Teacher,* vol. 13, pp. 194–200, February, 1960.

[3] From *Reading I've Liked,* by Clifton Fadiman, copyright 1941 by Simon and Schuster, Inc., New York. By permission of Simon and Schuster, Inc.

speed and comprehension to be high when comprehension was measured as number of right responses, low when it was the ratio of rights to number attempted, high for easy material, and lower for harder material. Intelligence also affects the relationship between rate of reading and comprehension. At the upper levels of intelligence, rapid readers tend to be more efficient, but at the middle and lower levels the slow reader tends to comprehend better.

Improving skill in one area of reading may contribute to proficiency in another. Developing vocabulary may result in increased comprehension. Both may contribute to greater efficiency in reading. Speed of reading, which is "so much a function of vocabulary and comprehension," may also be influenced by such factors as "rate of concept formation, ability to organize ideas and general word knowledge" [73, pp. 336–337].

The positive correlation between speed and comprehension has led some persons to infer that the more rapidly one reads, the better he will comprehend. To some extent this is true. Montaigne said, "My thoughts go to sleep when they are seated, so they and I walk." The popular prescription "Slow but sure," is not supported by reading research.

This does not mean, however, that a student will improve his comprehension by speeding up his reading. Some persons become tense and confused when speed is emphasized. The comprehension of twelfth-grade students decreased slightly when their rate of reading was increased from slow to medium; it decreased much more when they tried to read at a rapid rate. There is a point, different for each individual, when comprehension may be expected to decrease considerably if the rate is sharply increased. "An alteration in rate, which is not adjusted to the difficulty of the material, the purpose in reading, and the general ability of the individual will disturb the normal course of the thought processes involved" [4, p. 29]. Flexibility in being able to vary rate and procedure to suit material and need may be an aspect of over-all personality functioning.

The concept of *rate of comprehension* is much more useful than the concept of *rate of reading*. Since speed without comprehension is worthless, the greater emphasis should be placed on comprehension [93]. And a further question that must be asked is: What kind of comprehension? The conception of comprehension of those who report fabulously high rates of reading is certainly very different from that presented in Richards's *How to Read a Page* [74, p. 43].

Response to Reading. Effective writing arouses some emotional response in the reader. A piece of writing may evoke feelings of pleasure in the author's felicity of expression, approval of his point of view, sympathetic understanding of his characters, delight, or exultation. Or it may evoke feelings of boredom, annoyance, prejudice, dislike, resentment, or fear.

To stimulate students to feel with or "feel into" fictional characters, the

eacher may ask them to imagine themselves in the same situations. Emotional responses are called forth by questions beginning: How would you have felt when. . . . Some degree of emotional involvement in the book or article is basic to creative reading [46].

Great books or poems may be a source of self-revelation—they stimulate us to explore ourselves and our world. "Different minds have found different things in them" [74, pp. 11–12]. Such works have met the emotional needs of many kinds of people.

We read them for the sake of the things their words—if we understand them—can do for us. But understanding them, of course, is not making them mean something we know and approve of already, nor is it detecting their ignorance and limitations. It is using them to stretch our minds as they have stretched the minds of so many different readers through the centuries [74, p. 15].

How you read and the speed at which you read depends largely on what you expect to do with what you read. You may read the Sunday paper just to pass the time or to reflect on the state of the world. Obviously, in each instance your rate of reading and your method of reading will be different. "The only real question with respect to speed is, 'How rapidly are you getting what you want?'" [71, p. 90]. Rate will vary with the kind of comprehension you want.

What you want is an intrinsic part of the reading process. It determines what you choose to read, how much you remember, the effort you put forth, the mode and rate of your reading, and the satisfaction you obtain. You become a better reader as you read to get a meaning or to accomplish a purpose that is important to you.

Wide individual differences are found in the retention of what is read. In one experiment [24] three factual passages were given to pupils in grades 7 to 9, to be read at their own rates. A test on comprehension and memory was given immediately after reading and then repeated one day, fourteen days, thirty days, and one hundred days later. The following factors were found to influence memory:

1. Familiarity of material—familiar material is more easily remembered than new or strange material.

2. Length of time intervening—the rate of forgetting is rapid at first, then slower; but there is a positive correlation between immediate memory and delayed memory.

3. Meaningfulness of the material—the initial forgetting for factual material is less abrupt than for nonsense syllables. With meaningful material, the point of complete forgetting is not approximated even after one hundred days.

Personal Development through Reading (see Chapter 19). If one knows books and knows individual students, one can recommend books that meet an individual's need. There is such a wide range of reading ma-

terial available today that it should certainly be possible to find books that will mean a great deal to an individual. Different individuals, of course, will extract different values from the same book. The teacher who reads something aloud to his class every day and observes individual students as he reads will get hints as to which kinds of books strike sparks from different students. By talking with them informally, listening to their group discussions, and observing the creative activities that grow out of their reading, he will gain additional information as to what books contribute most to students' growth.

In English classes there are many opportunities to acquaint students with true-to-life literature that may give them insight into their own problems and suggestions for solving them. This does not mean that teachers, untrained as they are in psychotherapy, should delve deeply into the emotional problems of children and adolescents. Indeed, students sometimes voluntarily bring out personal experiences that the teacher does not know how to handle. Teachers should not encourage students to reveal more of themselves than they are ready to communicate. Nor should they introduce literature or literary interpretation for which students lack the requisite emotional readiness and background of experience.

But it would seem desirable for teachers to help students, through the study of literature, to understand how people may feel when they act in certain ways, and to discuss motivations in a natural context of literary experience. Literature may serve as a sounding board: some issues raised in class may be clarified by discussion; others the teacher may want to follow up with individuals.

THE READING PROCESS

The modern psychology of learning views reading as more than the simple association of printed symbols with their meaning. It recognizes the complexity of the process. This complexity may be represented schematically as follows:
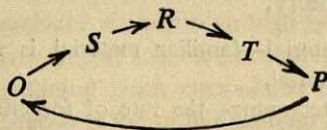
The Reader. *O* stands for the person, whom psychologists often refer to as an *organism*. Reading begins with the reader. On his self-concept, the degree of confidence he has in his ability to make progress in reading, and need, the amount of effort he puts forth largely depends. He may need to read better in order to read his girl friend's letters, to get and hold a job, to take part in a play, to succeed in high school and college—these are

some of the reasons that adolescent retarded readers give for wanting to improve their reading.

Thus the individual's immediate intent or mind-set toward the reading situation governs his concentration and determines the effort he puts forth. It influences his selection of books and parts of books; it may show him what to look for. When he knows what to look for, he will be more likely to see relations, recognize important ideas, and skip over irrelevant details. On the other hand, his intent, mood, or purpose may make him blind to certain words and cause him to misinterpret some or give overpotency to others.

The person's response to reading is also influenced by his visual and auditory acuity, fatigue, prolonged stress, or endocrine disorders, as well as by more important psychological factors, such as mental and linguistic abilities.

Reading may be viewed as a manifestation of personality and character. As such, proficiency is determined by social values and influences and personal motives, as well as by cognitive factors.

The Stimulus Situation. *S* stands for *stimulus configuration* or *stimulus situation*. The reading material is the focus of the stimulus situation. Both format and content are important.

Older children who lack proficiency in reading are often repelled by thick books with few open spaces for resting the eyes and thoughts. Superior readers are dissatisfied with books that are densely packed with facts impossible to organize. Since reading must be rewarding in some way, books should be appealing to a wide range of ability and interests.

The stimulus situation includes the setting in which reading is done— physical conditions, pupil-teacher relations, peer relations, parent-child relations. Classroom illumination should not be ignored, although its relationship to reading efficiency has not been clearly determined. There are wide individual differences in reading proficiency under different conditions of illumination. Indirect incandescent lighting, which produces 20 to 30 foot-candles, is initially less expensive, though more costly to operate than fluorescent lighting. Good lighting obviously involves the quality as well as the quantity of illumination and provides for easy vision in all parts of the classroom or library where students are reading.

Activities that require reading and are of real concern to the student provide the ideal motivation. To be conducive to reading, a classroom should be relatively quiet and orderly; individual interest should be encouraged and rewarded; and anxieties should not be allowed to become intense. Learning takes place best in a secure, friendly, stimulating environment. Similar conditions in the home are favorable to growth in reading.

Responses to Stimulus Situations. *R* stands for *responses* to the stimulus situation. Both stimuli and responses are much more complex than was

formerly supposed. Reading material presented in different ways brings different results, even with the same individuals. A given method will not get the same results a second time if some aspect of the total situation is different.

Students learn to adopt behavior that is rewarded or reinforced. And the more quickly the reward follows the correct response, the better. Rats running in a maze showed a marked drop in errors when a reward was introduced; errors went up when the reward was withdrawn. Pigeons did not learn when the reward was deferred until the end result had been achieved; they learned rapidly when any move in the right direction was rewarded. The Skinner reading machines are based on this principle and also on the skillful specific analysis of the learning process. Punishment may delay abandonment of the undesirable response, which, if ignored, might have disappeared sooner. How different this theory is from general practice! Instead of reinforcing correct reading with a smile, a nod, a word of approval, we tend to say nothing until the student makes an error; then we pounce upon him.

Any combination of the personal and social factors already mentioned may influence the reader's response. Almost simultaneously he may use the trial-and-error method, show insight, be influenced by the attitude of his peers, and show resistance to a dominating parent.

Imprint of Impressions. *T* refers to the *trace* left as the result of previous experiences. Proficiency in reading depends upon the retention of previous learning.

Associations between words and their meanings are strengthened by success, by a feeling of satisfaction. The insecure student especially needs to see results—an increasing pack of word cards recognized at sight, graphs showing improved speed and comprehension, before-and-after comparisons of summaries written or tape recorded. He should receive genuine recognition or approval for his progress. For the student who is absorbed in his reading, no extrinsic reward is necessary; the fascinating content of the book is sufficient reward.

Reading and Experience. Reading depends on experience. Words become meaningful to us through experience. If a word has no roots in our experience, we must translate it into other words that connect it to realities with which we are familiar. Everyone has "wells of meaning" into which he dips when he is confronted with a word.

Information gained by reading should be put to use; use reinforces retention. In general, retention is best when sufficient time is given to making the impression; the student reads with an active mind; and new ideas are associated with past experience and put to present use.

Perception of the Reading Situation. *P* refers to the reader's *perception* of the reading situation—whether he perceives reading negatively as drudgery and a source of anxiety, or hopefully and as a source of satisfaction.

His perception of each new reading situation is the resultant of the interaction between the reader (O) and the stimulus situation (S). If a person has had generally unpleasant experiences in connection with reading, he will seek to avoid similar situations. His tendency toward avoidance may continue long after the unpleasantness of the situation has disappeared. We often see this response in seriously retarded readers of high school age. The trace left affects the way the reading situation is perceived the next time. It makes a great difference whether a new reading task is approached with boredom, dislike, anxiety, fear, or feelings of inferiority; or with enthusiasm, confidence, and interest. A person's previous experiences in reading not only give meaning to the words read but also, by creating a certain expectancy and readiness, partly determine the emotional tone of the situation and his response to it. He perceives the new situation as pleasurable or threatening, as "something in which he will succeed" or as "something in which he will fail" [86, p. 68].

Perception of the essential requirements of the reading situation is also necessary. The reader must assess both his own and the author's mood, intent, and purpose before he can bring his knowledge and skill to bear with maximum effect.

Introspective Reports of the Reading Process. Perhaps the most revealing information about reading processes can be gained through introspective reports written by students. Good readers seem to be more aware of the process they use than are poor readers. When asked to describe their method of reading, the good readers said that they "skimmed rapidly to see what the author was trying to do"; "decided on the kind of information that would be most important in that particular article"; "looked for main ideas in the first or second sentences of the paragraphs"; "related ideas in the article to previous knowledge of the subject"; "tried to see whether anything the author said or implied justified his conclusion." The poor readers, on the other hand, tended to be vague and general about their reading processes.

Except for records of eye movements or of performances on standardized tests, we have little information about the reading process of individuals. Dewey's case studies of eighth-grade boys and girls, while supplying significant details as to how a passage may be comprehended, did not give much insight into reading processes [22]. More recently, at the University of Chicago, introspective and retrospective methods have been used to understand the process of interpretation of poetry and other kinds of reading material employed by readers of different ages [40].

Introspective reports made by superior graduate students may throw some light on the nature of reading. They highlight individual differences in the reading process and the extraordinary complexity of effective reading. The following account is one student's attempt to describe his method of getting the structure of the author's thought:

I find my method of gaining ideas from reading is comparable to building a skyscraper. I first read the material through completely and quickly. On the way, I get a general outline or skeleton of the material. After this reading I go back and start over more slowly. This time I argue my way through the book and fill in the skeleton which I built the first time. This seems to be my method for reading material which is rather difficult.

This student reads with an active mind and follows the generally effective procedure of getting a sense of the structure of the passage as a whole and of what the author is trying to do before attempting to select important points and details.

The role of distractions is introspectively reviewed by another student as follows:

I found my eye following the words down the page while I was still thinking of something quite remote suggested in the previous paragraph. When the material was very familiar, I found myself planning my schedule for the next two days. Some noises in the hall and out of doors were distracting; the noise of elevated trains, for example, made me glad I wasn't at the moment being jostled around in a subway as I was yesterday. Vocabulary offered a small difficulty, since I had to look up some words in the dictionary for exact meanings. One article was easiest for me to read because I am interested in the writer, who is a friend of my father. And finally, I had in the back of my mind the question assigned for discussion, namely: To what extent is nationalism rooted in the native constitution of man? And I was looking for possible suggestions to aid our group discussion.

Successful students seem to be able to meet course requirements by departing widely from commonly accepted reading procedures, and they describe eye movements that represent anything but an orderly progression of fixations across each line of print. From the fifty records collected, however, it would seem that superior students have these qualities in common: they approach a reading assignment with an inquiring mind; they use whatever aids the book affords for getting the structure of the author's thought; they are mentally active, even to the extent of going off on irrelevant by-paths; and they check their comprehension of the material. The highly intelligent student, like Diana of the Crossways, who read "a great deal at one gulp" and thought in flashes, needs fewer cues to get the author's thought than does a less intelligent student. Accordingly, the less able student may find it impossible to employ the flash method, which the brilliant student uses with good results. Each reader appears to have certain idiosyncrasies of method that seem to aid him, although they may be quite inappropriate to another student or for use on another kind of material.

RAMIFICATIONS OF READING

Significance of Reading. *Social Significance.* Reading has social significance in the world today. According to Gray, the interest in reading has

never before been so keen or so world-wide in scope as it is at the present time [40, p. 1]. The close contact between different peoples and cultures necessitates communication. Gray pointed out that among all nations an awareness has developed of the importance of world-wide literacy as a factor in promoting greater individual welfare and social progress (illiteracy rates are highest in the economically underdeveloped parts of the world), and as a means of improved international understanding.

The magnitude of the problem confronting the world can be appreciated when it is realized that only half the world's children of school-going age attend school and only 10 per cent are at the postprimary level [95, pp. 13–31]. Half the adults of the world are illiterate, and hardly a third have attained functional literacy, i.e., a level of reading ability normally expected of a child after four years of schooling [94].

This state of world illiteracy cannot be dismissed as not being any of our concern; the democratic and communist ideologies are in feverish competition for men's minds and loyalties on a world-wide scale. The improvement of literacy is a prerequisite for the dissemination of ideas and, hopefully, for more rational choices in matters of importance.

Illiteracy is, however, not confined to the underdeveloped countries of the world. In the United States 11.0 per cent of adults have not attained functional literacy, the proportion ranging by states from 3.9 to as high as 28.7 per cent [38, pp. 51–52].

The draft figures in both world wars revealed an illiteracy rate, the extent of which had been previously unrecognized. Thousands of men otherwise eligible for service could not meet the Army's minimum educational standards. A much larger number of persons lack adequate comprehension of what they read, or habitually distort it to conform to their prejudices.

Democracy cannot succeed when people are ignorant and cannot or will not think for themselves. Failure to become cognizant of historical trends, to discriminate fact from opinion, and to detect and resist subtle influences makes the citizen the dupe of dictators and pressure groups who are seeking their own selfish interests rather than the welfare of all. By effective reading, one may protect himself against exploitation and manipulation.

Through reading, we can understand and appreciate the common achievements and goals of the whole human family and the unique contribution of every nation. A just and lasting peace depends upon the universal communication of a new concept of greatness—greatness through cooperation and good will rather than through competition and power. Every avenue of communication should be employed to build this ideal of personal and national greatness.

Through reading it is possible to build sound values and to arrive at means and methods for creative living in this machine age. Reading helps us to understand the new concepts of energy and envision how these will change.

Personal Values. Reading is required in almost all vocations. A young person doing routine mechanical work in a factory sees little need for reading anything beyond safety signs, rules, and other regulations. For these purposes a fourth-grade level of reading ability would suffice. This level of reading ability has been required by some employers who have traced accidents to employees' failure to read and comprehend signs and directions relating to safety. In the skilled trades considerable reading is desirable, if not necessary, for the best quality of work. In business some successful persons read little, relying instead on observation and personal contacts to obtain new ideas. Others use reading as a means of keeping one jump ahead of present practice.

The professions, of course, all require much reading during the period of preparation, as well as continued reading after graduation, to keep pace with new developments. A lawyer, for example, considered that "the ability to read well—to skim through an article, pick out important ideas in a paragraph, and make deductions from passages read—is the most important single factor in success in this field." Too often administrators and teachers do not demonstrate in their own lives the value of efficient reading; they do not pursue any systematic course of professional reading. Persons in law, engineering, and medicine say that reading is of the utmost importance in their fields and that a professional person cannot be successful unless he keeps up to date. For a few professions, such as library work, writing, and bibliographical research work, extensive reading is absolutely essential.

Reading would be a most rewarding way to use the increased leisure that we expect as a result of automation. Given increasing amounts of time to read and the opportunity to buy and borrow books, people may be educated to use at least one hour a day in reading good books. "Reading may be one of life's inexhaustible pleasures and blessings," Walter de la Mare said, "but it may also become mere habit, an escape from thinking or a drug." At its best, recreational reading contributes more than mere entertainment. It gives time for reflection on the ideas one encounters. Radio and television discourage deliberation; the viewer is hurried from one program to the next. Reading gives play to the imagination.

Reading is a form of experience. Through reading, horizons may be expanded; worthwhile interests identified, extended, and intensified; and deeper understandings gained of oneself or other human beings, and of the world. Reading often relieves emotional tensions and gives insight into personal problems at a critical psychological moment. We can often find the book we need when we need it, whereas the radio or television program available may be anything but agreeable to our mood or need. Reading is a creative act. As the writer creates a structure of thought, so the reader re-creates for himself the pattern of the passage.

Reading is also a path to new experiences. Using his own firsthand ex-

periences as a point of departure, the reader reaches out to new ideas presented by an author, transcending the limitations of time and space. Stevenson said, "Reading takes us out of our country and ourselves." According to Everett Dean Martin, "anyone who can learn from life can learn from books."

Reading is an aid to the organizing of experience. The mind, facing experience, seeks appropriate verbal symbols and organizes experiences around them.

Reading is one of several avenues of learning. It is related to looking, talking, listening, and writing. "The learning process in modern life is to a large extent conditioned by inability to fully interpret the printed passage" [104, p. 40]. A junior high school youngster summed it up in this way: "You could list hundreds of reasons why being a good reader is important but, to put it simply, reading is the key to learning and personal enjoyment." Another said: "Reading is to me one means by which I can find out as much or as little as I choose to know or learn about any given thing."

The personal and social aspects of reading are interrelated. As a little boy said after he had put together a jigsaw puzzle with the picture of a man on one side and a map of the world on the other, "When I got the man right, the world was right."

Reading and Communication. Receiving the thought that the author wants to convey and transmitting that thought to others are two sides of reading. To convey the intended meaning, a word cannot mean one thing to the writer and another thing to the reader; they must agree on the meaning of key words.

In many schools and colleges, much more attention has been given to measuring students' ability to take in ideas than to ascertaining their ability to communicate with others. The standardized tests of silent reading in common use are, on the whole, poor measures of reading to communicate. More valuable for this purpose are informal tests that encourage communication through written responses [83]. The question: What did the author say? requires oral responses which make it possible to appraise a student's ability to communicate the author's thought in a face-to-face situation [18, 83, 87]. Dictaphone or shorthand records of the student's first attempts to communicate what he has gained from reading a passage enable him to listen to what he has said and revise it. More evidence should be obtained as to the functioning of reading in students' casual conversation, in their discussion, in oral reports by individuals and by committees, in written reports, and in composition-type examinations.

Reading and Other Communication Arts. All communication arts are interrelated. Listening, writing, spelling, and looking—all important avenues of learning and communication are related in various ways to reading. Poor readers often have difficulties in speech—in pronunciation and

enunciation and in other speech skills. In general, a student who reads effectively is likely to write effectively [23]. A systematic reading program should improve all aspects of the student's language development.

Listening and Reading. In general, there is a high correlation between comprehension in listening and comprehension in reading [67]. If a student can understand what he hears, he may be expected to get the meaning of similar material by reading it. A common language ability may underlie both reading and listening.

The initial superiority of listening over reading as an avenue of learning tends to decrease as the child gains proficiency in reading. By the time he reaches junior high school, he sometimes gets more complete and accurate meaning from reading than from listening [9]. As children spend more time in listening to radio and television and less time in reading, this relationship may change. At present it is impossible to assign definite superiority to either reading or listening as a means of receiving communication, even on the college level.

Although a large majority of college students say that they prefer reading true-false examination questions themselves to listening as they are read, experiments have shown that they actually do about as well by listening [68]. However, poor students do significantly better when questions are read to them, while superior students tend to do about equally well with both methods.

The difficulty of the material also affects the relation between listening and reading comprehension. Easy material is comprehended equally well through listening or reading. If the material is difficult, students of high scholastic aptitude and reading ability comprehend more efficiently by reading than by listening. Auditory methods seem to be preferred when content is personal or intimate, reading when "close discrimination and critical judgment are called for" [9, p. 55]. King found no significant differences between boys and girls in response to auditory or visual presentation of test material [57].

Individuals vary greatly in their relative ability to comprehend by listening and by reading. Auditory defects may make reading a better avenue of learning for some, while visual defects may increase the relative listening efficiency of others. Practice may also make a person more proficient in one of these avenues of learning. A discrepancy between auditory and reading comprehension is one of the best indications of an individual's reading potentiality.

A much-disputed question between parents and children is: Does listening to the radio while reading decrease reading and study efficiency? Students differ in their opinions about the effect of having the radio turned on while they are studying. Some claim that it increases their reading efficiency; others admit that it distracts their attention. One experiment gave evidence that high school pupils studied more effectively when a musical radio program was turned on in study hall. This effect may have been

obtained under the stimulus of a novel situation; it might not hold day in and day out. Fendrick concluded, from a more carefully controlled experiment with two groups of sixty college students, that music played while students were studying probably decreased their efficiency, and that it affected the more intelligent students more seriously than it did those of lower mental ability [31]. Loss in efficiency is greatest when noise begins. After a while students tend to ignore it. At that stage silence becomes a distraction. Thus the radio, because of its variety, is likely to be more distracting than a monotonous hammering or other constant noises.

There are, of course, individual differences in the degree to which listening to the radio interferes with comprehension in reading. Some persons can concentrate in spite of distracting music, conversation, and noise. Some may even work more intensely because of the distraction. However, in the long run, resisting distraction is nerve-racking and tends to leave a person tired and irritable.

Television presents additional problems. Some high school pupils insisted that they could study while watching television. When asked how they did it, they said they did their studying during the commercials! We need more information on the ways in which listening to the radio and television, seeing motion pictures, going on excursions, participating in discussions, and engaging in handwork or creative art work may interfere with or facilitate reading.

Spelling and Reading. Spelling ability is part of the constellation of language arts, related to word recognition, grasp of meaning, vocabulary, and comprehension [51]. Students tend to be either good or poor in both reading and spelling. Correlations between spelling and reading are almost as high as between reading and group-intelligence-test scores [64, 99]. Improvement in reading often leads to better spelling. This does not mean, however, that poor spelling is necessarily caused by deficiencies in reading or vocabulary.

As pupils go through the high school, they tend either to improve or deteriorate in both abilities. There is some evidence that students in grades from the seventh through the twelfth spell better the words they have read. Pupils in the sixth grade learned to spell more words from wide reading and varied learning activities in informal social studies than from spending the same amount of time in the traditional type of history and geography classes. In both groups, improvement in spelling was a by-product of reading, not the result of special instruction in spelling.

Reading and Intelligence. Reading and intelligence have so much in common that one would expect a high correlation between reading tests and tests of general mental ability. Actually, correlations of .50 to .80 are often reported between scores on group intelligence tests and reading tests. Since reading ability is so largely involved in group intelligence tests, it is easy to see how the mental ability of poor readers may be mis-

measured, and that the group intelligence test should not be used to predict growth in reading.

Group intelligence tests that yield both a verbal and a quantitative score give a little more information than do those that yield a single score. The correlation between reading scores and quantitative intelligence-test scores is much lower than that between reading scores and verbal-intelligence-test scores. With elementary school children, using the California Test of Mental Maturity, the correlations were as follows [84]:

Language factors with Thorndike-McCall Reading Test 824
Nonlanguage factors with Thorndike-McCall Reading Test 557

With ninth-grade pupils, the correlations of the California Test of Mental Maturity were as follows [92]:

Language factors with Iowa Silent Reading Test . . . . $.685 \pm .041$
Nonlanguage factors with Iowa Silent Reading Test . . . . $.356 \pm .068$
Language factors with Traxler Silent Reading Test . . . . $.753 \pm .034$
Nonlanguage factors with Traxler Silent Reading Test . . . . $.357 \pm .068$

With the same age group, using different intelligence tests and reading tests, Hage and Stroud [43] likewise found that reading comprehension and reading rate correlated more highly with verbal than with nonverbal intelligence scores. Verbal-intelligence-test scores are affected more than nonverbal scores by reading proficiency.

With college students there were equally large discrepancies between correlations of the comprehension scores of the Iowa Silent Reading Test and linguistic and qualititative scores on both the American Council on Education Psychological Examination and the California Test of Mental Maturity [61, 102]. As might be expected, group-intelligence-test scores correlate more highly with tests of reading comprehension than with tests of reading rate.

Even the individual Stanford-Binet test, which has been widely used to estimate reading potential, tends to underestimate the intelligence of poor readers because of its verbal emphasis represented by items that require knowledge and use of words [14].

The Wechsler individual intelligence tests have the advantage of yielding both a verbal and a nonverbal score. The assumption has been made that when the nonverbal IQ is significantly higher than the verbal, the individual's reading can be improved up to the level of the nonverbal score. This is not necessarily true; for children usually have higher nonverbal than verbal IQs on the Wechsler Intelligence Scale for Children (WISC). Moreover, students with the same intelligence-test scores—because of many other factors both within and external to the individual—may vary in their ability to acquire different reading skills.

Different intelligence tests and subtests differ in their relationship to

reading capacity. Since poor readers have been found to show distinctive patterns of scores on the WISC, an analysis of subtest scores may shed light on the nature of intellectual difficulties a student is encountering in his reading [82, p. 17].

In the simpler associative stages of beginning reading, relative brightness may not be as important as previous experience [1]. Thus Durrell found that high mental age does not assure a high learning rate in beginning reading [25]. Apparently, knowledge of letters and the ability to identify sounds in words are more closely related to growth in word recognition skills than are intelligence-test scores.

Since reading plays such a large part in group intelligence tests, we would expect effective reading instruction to raise the IQ. Evidence that it does has been presented.

Since an individual's achievement may be affected by a wide variety of conditions, one may expect variability in reading scores on any level of intelligence [85]. The scatter in reading scores on a given chronological and mental age is wide, often extending over the whole range of the reading test. In general, at least one out of four students may be expected to do better in reading. Actually, almost every student can improve his reading in some respects.

Evidence is accumulating that it is not a waste of time to teach reading to students with low scores on intelligence tests. Among students with a wide range of IQs, no relation was found between gains in reading comprehension and initial intelligence-test scores. We need to experiment with various teaching methods designed for students possessing various degrees of mental ability. Adolescents with IQs as low as 60 have been successfully taught to read signs, directions, and other simple practical material.

Since there is always the possibility that the test results do not represent the individual's true potential mental ability, it seems wise, as P. E. Vernon suggested, to give each student the best possible instruction under favorable conditions and see how he responds to it.

School Achievement and Reading. It has been estimated that 80 to 90 per cent of college work involves reading skills and that about 25 per cent of college freshmen do not read well enough to do their work successfully. If a student's success in school and college depends so largely on his reading efficiency, then we should expect a close relation between school marks and reading. However, this correlation is not so high as would be expected —it averaged only .31 in one study [72], and this figure fell to .16 when scholastic aptitude was held constant. There are several reasons for this: the unreliability of teachers' marks, the inadequacy of reading tests, the fact that each subject requires a special kind of reading [93], and the many other factors that may influence school achievement, such as attitudes and motivation, study habits, and personality traits.

Speed of reading is even less positively related to high school and college

grades than is reading comprehension. Bond [12], on the basis of studies with ninth-grade pupils, suggested that a generally slow rate of reading is likely to accompany high achievement on tests in science, mathematics, and Latin.

In a study of 152 college freshmen, vocabulary score was the only single variable that had any substantial correlation (+.46) with grade-point averages. Reading comprehension had a correlation of +.28 when vocabulary was held constant [78].

Evidence of the effect of reading programs upon scholastic improvement is scanty. There have been relatively few research reports on this question. Of these, only one study using control groups reported significant gains in academic grades for students in the reading classes. Perhaps this lack of evidence of the effectiveness of reading courses may be attributed to (1) the fact that some of the students who are enrolled in such classes do not take them very seriously, and (2) the fact that many courses of this type do not offer sufficient instruction and practice in reading methods suitable to each subject.

THE EFFICIENT READER

A mature view of the nature of efficient reading includes these self-evident truths:

Learning to read is a lifetime process.

Learning to read is a complex process.

Reading is not a mechanical process; it is basically a process of associating printed symbols with meanings originally derived from experience, but it also involves thinking, feeling, and applying. Mature reading requires the synthesizing of ideas. The analysis of words and letters necessary for word recognition is done automatically, except when an unfamiliar word presents difficulty.

Reading is receptive communication.

Reading is purposive.

The real question about one's reading efficiency is not "How fast am I reading?" but "How fast am I getting the meaning, and how fast am I getting what I want from my reading?" [71]. The efficient reader, as he reads, adjusts his rate and method to the content in the light of his goals or questions; he skips parts that are trivial, familiar, unrelated to his goals and purposes, or available in better sources.

Concentration "is a by-product of having a goal that challenges the whole mind."

Reading need not always be rapid; when one's goal is pleasure and recreation he can use any rate and any method which contributes to his enjoyment.

The mature reader is socially motivated; he is concerned with making a better world.

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CHAPTER 2

Glimpses of Present Practice

One teacher asks: "Where can I find examples of good reading programs? What are some common faults in poor reading programs?" Another writes: "I should like to know about some of the ways in which other schools have attacked the problem of aiding students whose reading skill is inadequate." As these inquiries indicate, the experience of those who have found ways of handling a problem is helpful to those who are facing somewhat similar situations. We shall therefore present some snapshots of outstanding reading programs and point out their sound features.

READING PROGRAMS IN SCHOOL SYSTEMS

Every school system is confronted by the reading problem—the increasing numbers of pupils whose limited reading ability prevents them from doing the schoolwork which teachers expect of them. Superintendents with vision have tried to solve this problem in various ways: by modifying the curriculum; by making reading an intrinsic part of the student's program through the high school years; by offering courses in the improvement of reading to all pupils who wish to take advantage of them; and by providing special classes and clinical services for the most seriously retarded readers. Following are brief descriptions of the programs in several large city systems.

The Philadelphia Reading Program.[1] The aim of this reading program was to help more young people succeed both as students and as persons.

[1] The Philadelphia program is described in detail by Helen Carey and Dorothy Withrow in two unpublished doctoral projects, Teachers College, Columbia Uni-

In the Philadelphia schools the concept of growth in reading as a developmental process requiring instruction from first grade through college has gained increasing acceptance.

The reading program in the elementary schools began as a reading-adjustment program many years ago. The reading-adjustment teacher provides remedial instruction for those retarded readers who seem to have the greatest potential for improvement. In each of the eight school districts, a "language-arts collaborator," a classroom teacher on released time, has general supervision of the elementary school reading program.

After a thorough recent survey of the elementary school reading-adjustment program, two elementary school teachers, with a background of training and experience as teachers of reading and as successful language-arts collaborators, were released to conduct a vigorous in-service training program for both reading-adjustment teachers and regular classroom personnel in the elementary schools.

In accordance with the mandatory state program of developmental reading for all pupils in junior high school, each of Philadelphia's junior high schools now provides instruction in developmental, as well as in remedial, reading. The developmental teaching is done by the English faculty in each junior high school, usually under the leadership of the school's remedial-reading teachers. An intensive in-service training program has been established in each junior high school. A curriculum guide, *Developmental Reading, Grades 7, 8, and 9,* has been published by the curriculum office and placed in the hands of all junior high school developmental-reading teachers. During the fall term of 1959, a weekly television program, featuring demonstration teaching, served as a further means of in-service training for junior high school teachers.

The reading program in the senior high schools began with the establishment of remedial groups of not more than fifteen students whose achievement in reading seemed to be below their mental potentialities. To teach these classes one or two reading teachers were added to the regular staff in each school; this lightened the load of the other teachers. In some schools the reading classes took the place of regular tenth-grade English. No stigma was attached to membership in these classes. In fact, there was a waiting list. One student wrote, "It is surprising how much more you know about yourself after you have been in such a small class." These small reading classes served as a laboratory in which methods and materials could be developed and tested; the experience thus gained was passed on to teachers in regular classes.

As the program developed, the reading teachers spent more and more of their time helping the teachers of regular classes to improve the reading instruction in all subjects. In accord with the developmental concept of

versity, New York, 1955. Dr. Carey contributed the information given here on the latest developments.

reading, several senior high schools have introduced courses in advanced reading and study skills for college preparatory students and courses in developmental reading for all students, in addition to the already existing courses in remedial work for retarded readers. At least three senior high schools have organized in-service training programs involving *all* the members of the professional staff, including counselors, librarians, and department heads. These programs have the triple purpose of (1) improving reading skills by means of instruction in the various content areas, (2) improving achievement in the content areas by means of instruction in appropriate reading and study skills, and (3) improving general school adjustment by helping students experience the satisfactions that accompany greater scholastic success. Bibliographies and study guides for the professional staff have been prepared and distributed, special faculty meetings have been planned, and expert consultant service has been secured.

One senior high school has experimentally revised its entire English curriculum, grouping all students by their achievement levels in reading and writing rather than by grade placement.

The reading clinic of the Philadelphia public schools was recently opened with the appointment of two full-time school psychologists with backgrounds of clinical and classroom experience in the teaching of reading. The two main services of the clinic are diagnostic study of children with severe reading disabilities and in-service training for teachers and counselors. Children in grades 3 through 12 who have normal intelligence but show inability to respond to reading instruction receive a thorough appraisal that takes into account both skills and capacity. Case-study reports are sent to the child's school with detailed recommendations for follow-up procedures. Conferences are held with parents, principals, counselors, and teachers, and with the children themselves.

Clinical instruction for children was at first limited to the reading clinic of the Philadelphia Summer Workshop for Teachers, held each July. Plans for the future call for developing a competently staffed clinic school which will operate throughout the school year to provide specialized, individualized teaching for the children who are most seriously disabled in reading. The purpose of the new clinic will be threefold: (1) to help the child with a severe learning problem, (2) to provide in-service training for teachers and counselors, and (3) to conduct research in the field of reading disability.

Largely through the efforts of home and school associations, community interest and support have been secured for the reading program of the Philadelphia public schools. Reading teachers have appeared by invitation at home-and-school-association meetings to present the schools' program. Parents have contributed generously to provide expensive instructional materials, whose cost frequently exceeds the appropriations regularly available to the schools.

This brief description of an evolving reading program illustrates three important trends: toward continuity in reading instruction from kindergarten to college; toward integration of reading instruction with the teaching of every subject; and toward development of a comprehensive, whole-school program which serves the needs of students representing a wide range of reading potential and proficiency. This program also accents the importance of providing for the continuous growth of teachers, administrators, counselors, librarians, and the reading specialists themselves.

The St. Louis Reading Program. The reading program in the St. Louis public schools has four unique and notable features: [2]

1. *Analysis of Levels of Reading.* In the primary grades a detailed analysis of pupils' reading skills is made—interpretative skills, word analysis skills, mental ability, physical and sensory factors. Children's level of performance in these skills is appraised by reading tests and by the daily observation of teachers.

2. *The Primary Classification Plan.* There is an ungraded primary school for all primary children. If, in the third year, the children have not achieved the top level of achievement for the primary grades, they are placed in groups of twenty with well-qualified teachers where, under good conditions, they make a final effort to build basic reading skills before they have to deal with middle-grade textbooks. Over the past several years, thousands of pupils have been saved from trouble and frustration by these "Rooms of Twenty."

3. *The Reading Clinics.* At first these offered only diagnostic and remedial service, but they have now become language-arts centers with a language-arts consultant in charge of each. Every year promising public school teachers are added to the small permanent clinic staff; here they become familiar with diagnostic and remedial procedures. Thus the clinics serve as in-service education centers.

4. *Evaluation of the Language-arts Program.* A detailed guide for evaluating the language-arts program has been prepared. This consists of criteria by which the teacher may rate his performance in teaching reading, spelling, and other language activities. The language-arts consultants in the reading clinics serve as visiting committees for the evaluation of a school's language-arts program. The results in the language arts, as shown by standardized tests, have been particularly gratifying.

Desirable Features of City-wide Reading Programs. Interest and cooperation on the part of administrators are essential for the development of a program suited to a given school system. It is also essential to secure the leadership of a skillful supervisor who is expert in the technical aspects of reading.

Among the features to be considered in the program are a basic de-

[2] Described by Dr. William Kottmeyer in a letter to Dr. Strang and in *Evaluation Handbook for Elementary Schools,* third experimental edition, 1952, the *Primary Classification Plan,* the *Evaluation Handbook, Levels in English,* and Kottmeyer's latest book, *Teacher's Guide for Remedial Reading,* published by Webster in 1959.

velopmental reading plan for all students from kindergarten to college; motivation of reluctant readers; special instruction and practice for retarded readers on all grade levels presented as an opportunity for self-improvement rather than as a penalty for low achievement; and clinical treatment of seriously retarded readers, to be referred by teachers through the principal or guidance worker.

Special attention should be given to beginning reading. If a first-grade teacher seems to be unsuccessful, she should be replaced or helped to strengthen her instruction. Durrell and his associates [23] found that communities where there was no supervision of first-grade teachers had the lowest reading-achievement records.

Through workshops, departmental meetings, reading-case conferences, and other in-service education methods, principals, teachers, and others concerned can be helped to grow in their responsibilities for the improvement of reading. The program should also provide room for an experimental attitude in which various methods are tried in different schools and teachers are encouraged to experiment. It is of basic importance that the teachers have access to appropriate materials of instruction for a wide range of reading ability and interest. All school systems could gradually incorporate these features into their programs, using the resources in the local community and releasing the creative energy of all members of the school staff.

A FIRM FOUNDATION IN ELEMENTARY SCHOOL

The typical beginning reading program uses a basal reader and follows quite closely the teaching suggestions in the accompanying teacher's manual. The program usually includes a readiness feature, and involves the teaching of a small basic sight vocabulary through pictures and exercises that are part of the series or through stories that the children dictate. Simple stories in the reader and in supplementary books soon follow. Contrary to popular opinion, teachers do teach phonics; they help the children associate initial consonants and other sounds in unfamiliar words with the same letters and sounds in familiar words. This pattern of teaching beginning reading may be varied in many ways. The following two programs depart from this pattern in important ways.

Accent on Early Identification of Letters and Sounds. Durrell and others [23] have presented evidence of the effectiveness of the following beginning reading program. Both the experimental and the control groups, twelve classes of each, totaling 614 children, used the Scott, Foresman basal readers. The experimental program placed greater emphasis on systematic early instruction in letter names and on identification of sounds in spoken words, followed by instruction in the sounds of the letters and in applied phonics, mostly by means of whole words in meaningful situa-

tions. However, "suitable practice in meaningful sight vocabulary and aids to attentive silent reading" were not neglected [23, p. 5]. So that the pupils should not form the habit of slowly sounding out each word, they were given early practice in making rapid responses to questions about the meaning of sentences in silent reading. Their interest in reading was kept high by means of related activities. Flexible inductive methods of word analysis were used in preference to formal teaching of rules and exceptions.

The children were grouped according to rate of learning, knowledge of letter names, and ability to identify sounds in words. With those who ranked high in these respects, the reading-readiness program was omitted and work in word recognition and phonic analysis was started immediately. With those who ranked lower, the main emphasis was on learning letter names and identifying sounds in words. Much of the instructional material had to be prepared by the teachers.

Group and individual tests were administered periodically to determine the children's knowledge of letter names and sounds. These were supplemented by the Otis Quick-scoring Mental Ability Tests, Alpha, and an individual test to determine the rate of learning of ten words. Other tests of applied phonics, oral reading, word classification, etc., were added as the children's abilities increased.

As would be expected, significant differences favoring the experimental groups were found in all the abilities in which they had had systematic practice; particularly impressive were the achievements revealed by the June tests of oral reading, paragraph meaning, and all types of phonic ability.

A further study called attention to the wide differences in letter knowledge possessed by children entering the first grade. Children with high learning rates and superior background skills made better progress when the reading-readiness materials were omitted. Durrell concluded that "while knowledge of letter names and sounds does not insure success in acquiring a sight vocabulary, lack of that knowledge produces failure" [23, p. 6]. In a critical review in the May, 1959, issue of the *School Review* of the Durrell series of studies, Helen Robinson pointed out faults in the research methods that make some of the conclusions untenable.

Experiments in England and Scotland have shown the superiority of a somewhat different phonic word method [19, 25]. Instead of merely restricting the number of new *words,* as most of our beginning readers do, Daniels and Diack controlled the number of new *sounds* introduced on the principle of graded phonic complexity [18]. From the beginning, this system helps the pupils attach phonetic units to meaningful words. Thus the child has fewer different letter meanings to contend with; distraction, rote learning, and guessing are reduced.

Individualized Instruction. Recognition that there are individual differences in reading abilities and interests in every grade has given impetus

to the individualization of reading instruction. The third grade, in many schools, contains nonreaders as well as pupils who can read books of seventh-grade difficulty. This range of differences widens as the children advance through the grades.

At first it was thought that this problem could be solved by dividing a class into three groups: slow, average, and superior readers. There were attempts to disguise the bases for these groupings, but they were usually detected by the children. One youngster said, "The teacher calls us the Reds, Whites, and Blues, but she might just as well call us the Fruits, Vegetables, and Nuts." Although grouping of this kind was a step in the right direction, it did not provide for the individual differences that still existed within each group. Recognition of these differences led to the more highly individualized approach, generally called "individualized reading." The idea is not new. The Dalton plan of teacher-directed individualized reading and study was introduced in 1920.

An individualized reading program usually includes the following features [41]:

1. Keeping an adequate number of suitable books, representing a wide range of reading difficulty, interest, and content, continuously circulating in the classroom.

2. Telling the class about this new approach, making clear each pupil's responsibility for selecting suitable books, reading them independently, and sharing the ideas he has gained with the class. Pupils should also recognize the importance of reading skills in enabling them to read their books independently.

3. Demonstrating to the pupils the routine and self-management necessary for the smooth functioning of this program: methods of choosing a book, getting guidance from the teacher when necessary, keeping records and reports of reading, and going to the teacher individually or in small groups for instruction.

4. Record-keeping. Pupils find it easy to keep records that comprise brief entries on each of the following items:

Date	Author	Title	Where I got it	Why I read it	How I liked it

The pupil should be encouraged to make a personal response to a book. These statements may be written on 3- by 5-inch cards, and filed in their reading-record folders. Some pupils may want to keep charts to show the breadth of their reading, for example, G. O. Simpson's *Using My Reading Design*. The teacher's records are equally important. They should show clearly the skills the pupil has acquired, the skills he lacks, and the progress he is making, as well as containing notes on what and how much he has read.

5. Using an informal inventory to ascertain each pupil's independent reading level, his accomplishments and deficiencies, and his interests (see Chapter 14).

6. Helping each pupil choose a book that he can read and will profit by reading.

7. While the pupils are reading independently from their own selections, the teacher will hold conferences with individual pupils or small groups. In these sessions he may uncover difficulties, give help or instruction, and suggest suitable practice materials. The pupil will sometimes read to improve his skills, and at other times read independently for enjoyment.

8. Providing for class or group discussions or other activities such as reports and dramatizations in which the pupils share their reading experiences.

While these features are usually included in individualized reading, many variations in method are desirable and necessary. This type of individualization may be introduced in any group in which pupils have learned to read independently.

The Joplin plan [20], which has aroused so much interest, is new only in the administrative provision which it makes for handling individual differences in reading ability. In a daily reading period of one hour, pupils from several grades are grouped according to their reading levels. Appropriate materials and instruction are provided for each of these seven or more fairly homogeneous groups.

Informal appraisal of programs of individualized instruction has shown that teachers find much satisfaction in this approach to reading. Pupils enjoy the freedom of choice and read more books than in the single-book approach. They can read as fast as they want to and are not obliged to wait for others. They can find out things for themselves and hear about the books others have read.

Other possible values of these methods of individualizing instruction are these: They allow each child to proceed at his own pace; encourage initiative and self-direction in reading; promote voluntary reading and increase its enjoyment; fuse instruction with an ongoing reading activity; and afford the teacher the opportunity to give her entire attention to the specific abilities, needs, and interests of one pupil at a time, which is a great advantage even if the time be as short as ten minutes.

A possible disadvantage of this approach is that it may neglect systematic instruction and practice in reading skills. Too often an individualized program implies only incidental instruction in basic skills. Without basic reading skills, independent reading is impossible. It is especially important that older pupils receive instruction in critical reading and the deeper appreciation of literature; it is these skills that make independent reading most rewarding.

Two practical problems are an insufficient supply of books to meet the wide variety of interests and abilities represented in a class, and the inability

of some teachers to know individual pupils and when they are ready to read a particular book, to guide them in a wise selection of books, and to handle the informal group situation.

Most of the reports on this method have consisted, to date, of unevaluated descriptions [46]. Convincing experimental evidence of the effectiveness of individualized reading is lacking. Jackson [34] compared two programs of individualized reading with a conventional reading program that used basic and study-type readers in grades 3, 4, 5, and 6. One experimental group used the individualized procedure for 40 per cent of the total three hundred minutes of reading time, another, for 70 per cent. The results were inconclusive. Kaar, working with third-grade children, found that the individualized approach did not produce better results on standardized reading tests than did the more usual combination of group instruction plus some individual help [38]. However, the teachers were enthusiastic about the individualized procedure and believed that the children read more books and wasted less time than with previous group methods. Jenkins reported more favorable results for the individualized reading group—an average growth in vocabulary of 1.96 years as compared with 1.09 years for the control group [35]. The averages in total reading gains were 1.14 years for the control group and 1.41 for the individualized reading group.

Other studies favorable to this type of program are those by Bernard [7] and by Hart [31]. Bohnhorst concluded that group instruction with basal readers and individualized instruction with self-selection may vary in effectiveness with pupils of different reading abilities [9]. Teachers were also found to differ in their judgments regarding the relative effectiveness of the two kinds of programs. Enthusiastic support of "self-selection" in reading is given in Bulletin no. 29 of the Association for Childhood Education [3]. Articles are written from the standpoint of the reading consultant, the principal, and the teacher. Parents' responses to this approach are reported as very favorable. Many values are suggested. The individualized procedure described here should not be confused with free recreational reading. Skills are taught as needed and group experiences are included. Witty's recent thorough review deals with many aspects of individualized reading [68].

A Combination of Methods. Between the two extremes of systematic group instruction in reading skills and completely independent reading, there is a middle ground which includes the best features of both methods. Drill on letters and sounds may produce fluent pronunciation, but unless this skill is used in meaningful, interesting, purposeful reading, the child will not become an effective reader. Without group experiences, he will lack an important source of motivation in reading. Without instruction, he may not reach higher levels of reading development. Moreover, there are differences in children's responses to different methods [9]. For a child

who has failed to learn by one method, a new method may offer better prospects of success.

The teacher who is familiar with various methods can plan the best combination of procedures for his particular group. He may combine multi-level material, such as that issued by the Science Research Associates reading laboratories, to give systematic instruction and practice in basic reading skills with self-selection, individualized reading, and effective group instruction and discussion of books.

CONSOLIDATION OF READING GAINS IN JUNIOR HIGH SCHOOL

The junior high school years are a time to improve and build on the reading skills gained in elementary school, and to acquire the more complex skills that will be demanded in high school. To accomplish this aim, junior high schools have developed a great variety of reading programs.

Meeting Immediate Needs. When pupils' home reading is limited by lack of time or incentive, or by unfavorable conditions, they must be given opportunities to read during the school day. In one rural school a library corner with table and chairs and a variety of suitable books invited pupils to read. A pupil librarian and committee were responsible for keeping the books in order, for displaying them attractively, and for checking them in and out. Older pupils who needed practice in reading very easy books obtained this practice without embarrassment when they were made responsible for helping younger children select and read suitable books. The public library loaned books to the school for a four-week period, and the state department of education loaned books for a term or a year. In the seventh grade all the pupils had three periods a week in which they read books and articles of their own choice. They kept individual records of the books they had read, together with a brief comment on each one.

In the eighth grade, special attention was given to reading, with all pupils getting twenty periods of instruction. Part of the daily supervised study period was used for practice in developing the reading skills essential for efficient study of that day's assignments. Pupils learned to read for different purposes, using newspapers and periodicals for practice material as well as their text and reference books, and reading of each selection was followed by a check on comprehension. New words received attention; pupils discussed each word, tried to get its meaning from the context, and checked their guesses by looking it up in the dictionary. Some of the supervised study periods were used for work with retarded readers, individually or in small groups. A club period a week provided natural opportunities for reading and writing as well as for speaking and listening. A school newspaper with pupil editor and editorial committee motivated writing and reading. Without such a program many pupils would have been unable to read the kind or the amount of material required in the higher grades.

An Evolving Reading Program. The reading program in State Street Junior High School [3] has evolved over a number of years. It has always emphasized developmental reading. The pupils of each grade were divided into high, low, and average groups according to their scores on the Iowa Silent Reading Test, supplemented by the recommendations of teachers, and, in some cases, by their scores on the Stanford-Binet individual intelligence test. These groups were scheduled for a daily twenty-minute reading period, obtained by shortening slightly each of the regular periods. The superior readers broadened their interests and improved their tastes by making dramatic readings of plays, sharing ideas gained from articles and books, and spending one period a week in the public library. The average group concentrated on the reading skills in which they were weak. The low group learned how to recognize unfamiliar words, gained fluency by reading easy, interesting books, and practiced the skills they needed in order to get some meaning from the books required in their subjects.

Three small groups of nonreaders and slow learners were given individualized instruction and reading experiences that would increase their self-confidence. Seven children in one group were helped to gain proficiency in their everyday reading. One day they saw on the board—

No Parking Allowed	Men at Work
Detour	Danger
School, Go Slow	No Hunting
Dead End	Keep off the Grass

The teacher, Louise M. Whelan, said, "These are signs I saw this weekend. How many of you have seen them?" All had seen some of these signs.

"Jim, you are learning to drive a car, aren't you? Suppose you wanted to stop on a certain street and saw the first sign. What would you do?"

Jim knew this sign and answered, "I'd find another place to stop."

"That's exactly right."

"Suppose you were driving and saw the next sign [Detour], what would you do?"

No one in the group was quite certain as to what this sign meant.

"It's a French word that means 'to turn aside.' What would you do if you saw that sign?"

"Not go straight ahead; take a road that goes around and comes back on the same road," said Bill.

Similarly, the other signs were read and their meanings made clear. The teacher asked the boys to look for signs and other reading matter that they encountered in their every-day living and bring them in next period.

[3] State Street School, Hackensack, N.J., is in an urban, industrial, low socioeconomic area. Dr. William Patterson is the principal, Lois Sinniger, chairman of the evaluation committee, Louise Whelan, chairman of the reading committee in the beginning years of the program.

Movies were a vital interest of these boys. The teacher used this interest in improving their oral English and in furnishing beginning reading material for them. An over-age pupil, a discipline problem and a nonreader, also had a marked speech difficulty. One day he surprised the teacher by his enthusiastic and lengthy account of a movie he had seen. One phrase —"Make up your mind, make up your mind"—he pronounced with accuracy and emphasis. The teacher wrote his account of the movie, had it typed, and used it as reading material. The pupils' reading of this account was facilitated by their familiarity with the words and sentences and by their keen interest in the movie.

Other interests of these pupils included sports and current events. The teacher brought in a number of pictures of winter sports from the Sunday paper, mounted them with the help of the pupils, and typed on each one a short, simple paragraph giving information that the picture did not convey. The pupils read these pages eagerly, passing them from one to another.

These reading activities grew directly out of the pupils' interests as a group and as individuals. The teacher knew her pupils—their home backgrounds, interests, speech and reading difficulties, and records of their behavior in other classes. She used this information in providing the experiences and instruction that each pupil needed. For all the slow learners, the goals were immediate and tangible; the activities were simple and concrete and could be finished quickly. Reading grew out of firsthand experiences and was functionally related to their classes in music, arts, shop, health and physical education, and other subjects.

At first many of the regular teachers felt insecure at suddenly becoming teachers of reading. Some joined an extramural university course in the teaching of reading in high school, which was conveniently given at the school.

In later years more emphasis was placed on the teaching of reading in every subject. Reading experiences were also included as part of the guidance program. In the homerooms the pupils wrote reading autobiographies, kept records of their voluntary reading, took informal reading tests and studied the results, spent one period a week in recreational reading in the library, and discussed what they had read during the next homeroom period. Special reading groups, which met during the daily activity period, gave the most seriously retarded pupils a chance to build basic reading skills [27].

The librarian rendered an invaluable service. She searched diligently for easy books that the slow readers could read with pleasure instead of frustration. When they came to the library, she helped each one to choose a suitable book. She encouraged them to write book reviews to guide other pupils in their choices. When a teacher wanted books in her subject for the retarded readers, the librarian tried to obtain them.

A Workshop or Club Type of Program. In many schools there are boys and girls who score low in scholastic aptitude and have no definite vocational aims. Elizabeth S. McClure described a reading workshop for these pupils. Her class consisted of twelve boys and eight girls in the low ninth grade. They were characterized by lack of interest in school, dislike of reading, and serious behavior problems; they came from dirty, ramshackle homes devoid of comforts and of incentives to read.

The first step was to obtain the confidence and good will of the pupils. The approach was somewhat as follows: "We have many clubs in our school, but no reading club. Wouldn't it be fun to form one?" The club was organized and a chairman, a secretary, and two librarians were elected. Because the librarians were uncertain about their duties, the class visited the school library and spent a period browsing and getting help from the librarian in locating certain books. She agreed to supply the class with interesting bibliographies and to put on a special shelf books that they would enjoy. The town librarian was equally cooperative.

The pupils were tested on the Terman Group Test of Mental Ability and the Gray Standardized Oral Reading Paragraphs Test. They discussed their visit to the library and their current reading—mostly magazines of poor quality. The "club room" was given a bookish atmosphere with slogans and posters, attractive book covers, and colorful displays discarded by publishing houses.

Their next project grew out of the unit on radio in the ninth-grade civics courses. From magazines and newspapers they cut, mounted, indexed, and filed numerous clippings. Some of the pupils read with interest the radio issue of the little magazine *Modern Literature,* despite its difficulty. Several simulated radio programs were produced. Each reader was impressed with the necessity of being a good radio speaker. "You don't want your audience to shut you off, so you must try to do these things in your reading: read smoothly, phrase correctly, enunciate clearly, pause only in the right places, and read with expression—see the subject so clearly yourself that your audience will see it, too." One of their "broadcasts" was a quiz program centered on vocabulary lists taken from their reading.

Interest in a movie unit ran high, as is shown in the following description:

... they explored the better magazines for movie material and made a file comparable to their radio file. The school librarian provided a copy of *Motion Picture Digest* for everyone in the class. This type of reading was fascinating to the pupils because each had a favorite movie to look up. Unfamiliar words, such as "pathos," "spectacular," and "melodrama," were explained and illustrated by some particular picture which the pupils had seen.

Using the *Motion Picture Digest* as a model, the pupils wrote their own

critical reviews of movies they had seen, marking them + or −, for children, youths, or adults.

During the movie unit each pupil made a notebook in which he put the following material: a movie review, a paragraph or two telling why a certain story would make a good movie, clippings and pictures about movies, a list of good movie manners, reasons for studying the movies, requirements for a good movie, a list of sources of information about the movies, a summary of two stories about movies taken from *Adventure Bound,* and a vocabulary of words they had learned.

Other units were handled in the same ingenious, enthusiastic way.

This program had many successful outcomes, not the least of which was the improvement in the pupils' behavior—cooperation, attentiveness, alertness, and self-confidence. One timid little girl chosen as librarian blossomed under her responsibility and became one of the friendliest persons in the room. Before the program was begun, the pupils in this group had borrowed only six books from the library; at the end of the semester, the librarian reported that a total of 102 books had been withdrawn by children in the Reading Club. Not all of these books were read, perhaps, but at least they were examined. The town librarian likewise reported an increased interest on the part of members of the Reading Club. Other teachers reported an improvement in these pupils' reading comprehension and interest in every subject. At the close of the experiment the class radiated a certain vitality which had been lacking before the work began.

Vitality is the keynote of this program—a vitality achieved by setting in motion activities in which these boys and girls could function successfully. Reading was involved in each activity; the activity motivated the reading. Each activity was sufficiently complex and varied to provide for individual differences within the group; to these differences the teacher was alert [60, pp. 140–144].

Improvement of Reading and Writing through the Content Fields. A school-wide program in the ninth grade had two main features: concerted action by teachers of English, social studies, and science focused on the improvement of reading; and "reading clinics" for small groups of pupils, conducted by experienced English teachers [48]. In science, for example, only about half of the usual content in general science was covered. However, no unit was omitted; portions of each unit were selected for their intrinsic interest and importance, and for the opportunities they offered to develop communication skills. Writing skills were developed in each subject by assigning frequent compositions and correcting paragraphs dealing with subject matter in all three fields. Various types of paragraph development were studied. A notable feature of this project was the in-service growth of the nine participating teachers from the three departments. Guest speakers addressed faculty meetings, two members attended a course in reading and reported back to the group, the participating teachers were observed in their classes by departmental chairmen, and an

expert English teacher gave demonstration lessons on the teaching of various reading skills.

When English, social studies, and science teachers get together, find books on different levels of difficulty, use recordings and visual aids, and share their experiences with successful projects, improvement of reading is the result [55].

An Enriched English Program. The pupils in one ninth-grade group covered a wide span of reading ability and general mental ability; their attitudes toward reading were also diverse. In a term paper in a reading class of one of the authors, Thed E. Farra described his teaching of reading in this group:

I think my approach to reading is influenced by my presentation of language as a tool of communication. I like De Boer's definition in *Teaching Secondary English:* "Effective reading is the mind reaching out for meaning."

What do I do about reading? The school testing program has helped me see approximately where each student stands in general ability and reading ability. Although these students do not need drill in word attack, they do need to continue to grow in word mastery. We work on words in several ways: (a) We dissect them as scientifically as we can to see their parts. (b) We try to find as many patterns as we can into which our words will fit. (c) We examine the *forms* of the words for meaning clues. (d) We derive principles which would apply to types of words in general, and we continue testing these generalizations whenever we can to prove or disprove them.

We read from every possible point of view. Our year began with a study of symbols. We collected as many symbols as we could and interpreted their meaning. Each student chose a field of knowledge—science, health, aviation, etc.—in which he was interested, searched out its symbols, and reported to the class. We literally covered the walls of the room with symbols.

Aiming toward deeper understanding, we examined the letters, sounds, and words of language as symbols. Then we hunted for examples of symbolic language. We studied figures of speech and moved to their uses in poetry. Each student selected a poem, read it orally, and interpreted the symbols or figures of speech.

We then moved to Homer's *Odyssey.* We worked from student vocabulary lists and students' questions. Incidents were prepared for dramatization. Some students read, with feeling, the parts of the characters, while one student read the paragraphs of description. We have done a similar thing with Dickens' *Great Expectations.*

At least once each week we write an interpretation of ten lines of poetry.

Other projects include Shakespeare and science fiction. We shall also work with social studies content. For further practice in oral reading, these students will go into classes of slow learners where they will gather appropriate illustrations and then give oral readings of poetry.

Work remains to be done on the extension of literal meaning. These students show very little evidence of training in that direction. Units are being planned

on simpler procedures of inductive and deductive thinking, and on recognizing propaganda.

These are only a few of the procedures used in this class, where pupils were stimulated to stretch their minds and challenged to put forth the optimum effort.

Desirable Features of Junior High School Programs. In view of the influx of poor readers into our junior high schools, it is especially important that the reading program include some of the features described. Able junior high pupils should become proficient in the special skills needed for reading in many fields with deeper perception and greater critical insight. They should also develop the ability to analyze new words by pronouncing them or by recognizing their component parts and a deeper understanding of word meanings. Individualized reading instruction should be available to all pupils as an intrinsic part of their schedule. There should also be opportunity and time for guided free reading and group discussion. Activities such as taking trips, organizing a class newspaper, and following directions for making and doing things give meaning, use, and purpose to reading and writing.

Teachers should receive in-service education by a person skilled in both reading and human relations. In addition to demonstrations and the discussion of materials, this should include the sharing of the best procedures developed by teachers in each subject and appraisals of the methods used. Thus teachers will grow in this capability and a sound program will evolve, based on changing pupil needs.

PROGRESSION OF READING EXPERIENCES IN SENIOR HIGH SCHOOL

Many different patterns of reading instruction have been tried out in senior high schools also. Some merely attempt to help students succeed in an unsuitable curriculum. Some focus on one aspect of reading. Others give all students instruction in reading in English classes, with or without enlisting the cooperation of teachers of other subjects. Although many high schools still feel the need for remedial classes, interest in a developmental program is increasing.

A Limited Approach to the Reading Problem. When neither the principal nor the teachers are ready to make any fundamental changes, a limited approach is necessary. In a tenth-grade class where the prescribed course of study was unrelated to the students' lives and the reading material was both dull and difficult, only two innovations were attempted. The first was to solicit magazines that would provide some interesting reading and to encourage students to use the public library.

The second was a concerted effort to improve vocabulary. Teachers of

the various subjects made lists of key words in their subjects and helped students to acquire rich and meaningful associations with these words through firsthand experiences. These new words were then used frequently in conversation and in assignments and were written on the blackboard and discussed in class. The Latin teacher cooperated by teaching ways of getting the meanings of words from their derivation, and she provided practice in the use of Latin prefixes, suffixes, and roots in vocabulary building.

The English teacher made a special contribution by exploring with her students the origin of language and pointing out the sources of words that are in common use today. She compiled lists of words that they misused in their themes and conversations and words that they found unfamiliar in the required reading. These words were listed in a large class dictionary to which all members of the class contributed definitions, derivations, and examples of correct usage. Each student was encouraged to build up his own dictionary of difficult words. Sometimes the students invented word games of the quiz type. A corner of the blackboard was set aside for words having derivations of special interest. These words seldom failed to attract attention. The English teacher also gave students instruction and practice in using a dictionary and getting meanings from context. The English teacher's enthusiasm was contagious; the program brought results that justified repetition of the effort.

Accent on Recreational Reading. This program was designed to increase interest and pleasure in reading and to help students find time for it [51]. One period a week was devoted to reading a wide variety of recreational material. Students were free to choose anything they wanted to read except comics and required books. The teacher provided guidance in reading and an informal check on comprehension through individual conferences. As a result, the average increase in reading for a three-month period was 4.3 books per student. They found that it was not lack of time but failure to select appealing books that had limited their previous reading. They learned in English class to read for fun.

Reading in a Vocational High School. The program in such schools includes shopwork and subjects related to it, health education, music, social science, and English. These subjects require considerable reading ability; in the shop courses a student has to be able to read the safety rules and to apply them, to understand and follow directions, to become familiar with the technical words peculiar to the grade, and to use reference material and library aids.

In English the aim is (1) to enable students to read material relating to their vocation such as workmen's compensation laws, union rules, and other rulings that affect the trades; informative books and articles on employment opportunities, qualifications and training for various jobs, how to get a job, and similar material; (2) to interest students in reading as a

leisure-time activity; (3) to introduce them to some of the great books; and (4) to encourage them to read material that will help them to understand, appreciate, and work toward the realization of true democracy.

In some of the English periods the students enjoyed recreational reading. They selected literature that was appropriate for them.[4] One teacher began by telling the class stories and having the students tell him stories. Then they began to look for simple adventure stories to read. From the reading of true-to-life stories, they gained an understanding of people and an insight into their own problems of daily living. In their class discussions of the books and articles they had read, they came to appreciate the contribution that reading can make to conversation. In their independent reading they experienced the enjoyment that books can give. It was hoped that this interest would carry over into their out-of-school lives.

For groups that especially enjoyed singing, poetry was introduced in the form of songs. They began to find some of their favorite songs in poetry anthologies. Choral reading was particularly enjoyed.

The English room was equipped as a reading laboratory with books covering a wide variety of interests and levels of difficulty. The bulletin board was important. Clippings on personal appearance, music, fashions, and subjects related to the trades were especially interesting to trade school students. A number of different practice books were provided to meet individual needs. The teacher began building a file of practice exercises for developing different reading skills. The students themselves contributed reading material—a magazine that contained a very exciting story, pamphlets from the company where a parent worked, catalogues of schools giving correspondence courses. From a bank the teacher obtained pamphlets on thrift and taught a unit on starting a bank account. In this way, reading was closely related to the lives of the students.

The shops provided an excellent laboratory for reading. Here the students first became acquainted with the objects and the processes of the trade and then learned the printed symbols that described them. Thus a vocabulary in the trade subjects was built on a solid foundation. Students learned to read illustrated operators' manuals, trade catalogues, periodicals, pamphlets, and handbooks as sources of technical information, and descriptions of machines and processes. Much of this reading was too difficult and needed to be simplified. One boy's attitude toward reading changed when he was asked to read the safety rules to a group of his fellow workers each morning before work.

The librarian of the school was very skillful in choosing suitable books for purchase, in setting up many attractive displays, in acquainting students with the use of the library, and in helping those who needed guidance.

A journalism class was organized for students who showed an unusual

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[4] For example, see Anzia Yezierska, *Children of Loneliness*, and *Hunger* for foreign-born groups; O. Henry, *A Service of Love;* Katherine Mansfield, *A Cup of Tea.*

ability in writing, and an enriched course of study was offered to those who had ability to become teachers in trade schools or who wanted to continue their technical and academic training. There were also special small groups in reading for those who were markedly retarded. In these and other ways the students were given reading experiences that would be useful to them in their present and future lives.

Reading Instruction Offered to All Students. The Reading Improvement Service, Oak Park and River Forest High School, Oak Park, Illinois,[5] is open to all students on a voluntary basis. However, very few students of extremely low ability enroll for reading improvement, since they are in special English classes where they receive extra help in reading.

Reading-improvement classes are organized by scheduling students in order of application for groups that meet during some of their study periods. There is always a waiting list. Students come to their assigned group for a minimum of twenty lessons. The number in a group is limited to fifteen or fewer.

Reading difficulties are diagnosed. Information about individuals in the reading group is obtained from the office records. The Survey Section of the Diagnostic Reading Tests is given to all freshmen during the first week of school. All students are also given the Otis Test of Mental Ability. The American Council on Education Psychological Examination is given to all juniors and seniors. Having these scores available saves testing time in the reading groups and makes possible an informal personal approach in the first period. Other tests are given as they are needed by individual students.

Individualized instruction, suited to the needs of each student, follows the diagnostic study. If the students are weak in all skills, they receive practice and instruction in study type of reading. For this, *Reading for Meaning* by W. S. Guiler and J. H. Coleman, and *Practice Readers,* Books I, II, III, IV, by Clarence Stone and Charles C. Grover are used. If students are fairly strong in vocabulary but need help in general comprehension (usually juniors and seniors), they use as practice books *Reading for Comprehension* by E. L. Wright, *Study Type of Reading Exercises* by Ruth Strang, *Reading Skills* by William D. Baker, and *How to Become a Better Reader* by Paul Witty. If they are fairly strong in comprehension and rate but low in vocabulary, they do intensive work on vocabulary building. *Word Wealth* by Ward S. Miller is used as a basic text to provide instruction in prefixes, suffixes, and roots. They write original sentences using all the words they missed on the pretests; these sentences are checked by the counselor. If foreign background makes phonics instruction necessary, some of the exercises in *Basic Reading Skills* are used [28]. If students are strong in comprehension and vocabulary but low in rate, the reading-rate accelerator may be used. If they need special help in getting details on first reading, the Science Research Associates Better Reading

⁶ Reported by Kermit Dehl, reading counselor.

Books may be used, with major emphasis on comprehension. If they need special help in seeing groups of words quickly and accurately, the Renshaw Tachistoscopic Trainer is used. This is an individual tachistoscope operated by the student himself.

Progress sheets are kept by students for all books used. They keep a daily record of improvement in their scores, the need for more practice in certain skills, and special difficulties. A few especially good progress sheets are placed on the bulletin board as an inspiration to others. Each student's progress sheet is checked daily and discussed with him. Each is encouraged to work up to his ability; he is competing only with himself. Students are retested at the end of the course with the Survey Section of the Diagnostic Reading Tests. Almost without exception, students completing this program showed gains, sometimes unbelievably large. Teachers reported noticeable improvements in study habits and attitudes toward reading. A progress report goes to the student's home, his dean, all his teachers, and, of course, to the student himself. Teachers in all departments have been made aware of the need for helping students to read well in their respective subjects.

This program is developmental rather than remedial. Students representing the entire range of reading ability attend these classes; the valedictorian of the senior class was a member of one of the reading-improvement groups. Seniors preparing for college boards take work in vocabulary building and in improving rate of comprehension.

Large-group Lectures. At the opposite extreme from the individualized reading approach is the Newton plan of large-group lectures.[6] Recognizing that there is nothing sacred about class size, the planning team of the Newton schools considered the feasibility of classes of 100, 300, or 500 listening to and learning from a teacher trained in the techniques of facilitating learning. Large-group instruction would, they thought, reinforce classroom work and be especially helpful to new and inexperienced teachers with whom the lecturer was given time to work closely. At the same time, they realized that instruction must sometimes be "two on a log."

Six teachers of English and an art teacher assumed the responsibility of giving, to more than 2,500 students in grades 10 through 12, about one lecture per week as part of the course of study. With as much care as a concert pianist preparing for a recital, they developed a series of thirty-five lectures covering thirteen topics:

For sophomores: grammar (descriptive linguistics, and verbs and prepositional phrases) and use of the dictionary

For sophomores and juniors: punctuation (basic rules), spelling (basic rules), and symbols of correction

[6] The authors are indebted to Henry Bissex, Newton High School, Newton, Mass., for checking the description of this program.

For juniors: composition (paragraphs, unity, coherence, transitions), letter writing, and vocabulary

For juniors and seniors: the library and the research paper, idiom and language craft, and literature

For seniors: structure of poetry

For all: techniques of study (study habits and reading techniques)

Each topic required up to four lectures, so that sophomores averaged twelve lecture hours, juniors twenty hours, and seniors nine hours. In addition, a total of twenty-two lectures on speech topics were given to sophomores.

The presentation of these topics was aided by the use of overhead projectors in two large classrooms and the assembly hall. The lectures could thus be given to groups ranging in size from sixty-five to four hundred or more students. Attendance at the lectures was compulsory; the lecturer suggested follow-up assignments and tests for use by the classroom teachers; and part of each final examination was based on the lectures. The classroom teachers found it necessary, if the "direction" imparted to the students was not to be lost, to discuss the lectures in their classes and give supplementary instruction.

The three most important problems which arose in connection with this program were (1) finding time for the lecturers to prepare and present their material, (2) maintaining the autonomy of the classroom teacher—his freedom to teach in his own unique way, and (3) ensuring attentiveness on the part of the students. The students were baffled at first by the impersonal atmosphere and strict discipline of the lectures. There were many instances of the sleepy mind behind the alert face. To combat this tendency toward inattention, the lectures were made more dramatic by means of some interplay between the lecturer and the students. Pretests of the skills to be taught in the lectures showed the students the extent of their ignorance, and thus motivated them to listen and learn.

Many questions have been raised about this large-group program. With special time to prepare his material, and with special visual aids to present it, the lecturer could impart information to large groups more efficiently and skillfully than could the average teacher. The students got practice in listening and taking notes which may help them bridge the gap between high school and college methods of instruction. Since the total number of staff members was not reduced, teachers who were relieved of some of their classroom teaching could meet students individually and in small groups, and had more time to comment critically and constructively on written work.

The skeptic wonders whether the large lecture does not entail some loss: What of the meeting of minds, the give-and-take that is possible in smaller classes? What of the immediate discovery and correction of individual difficulties? What about the excursions and highways and byways of thought that make a small class exciting? Since learning takes place in a relationship, what effect will the impersonal lecturer have on the student's desire

to learn? In answer to questions of this kind, Bissex said: "The more I work with the large group, the more apparent is the need for the individual contacts of small groups. As class sizes get pushed over thirty, the individual contact that was still possible with smaller classes is progressively compromised."

Desirable Features of Senior High School Reading Programs. The needs of the students and the knowledge and skill of the staff are the basis on which the reading program is developed. When English teachers are enthusiastic and well informed about methods of reading improvement, the English period may become the core of the reading program, serving all the students. Both recreational and study types of reading are included. Instruction in reading, however, is not confined to the English period; every teacher is a teacher of the reading of his subject. Special reading instruction may be offered to all students in their study periods; special reading classes, carrying credit and giving individualized instruction, are available to those who are too seriously retarded to profit by regular classroom work.

The desirable trend in high schools is toward improvement of the reading of all students, toward prevention of reading problems rather than toward remediation.

COLLEGE READING PROGRAMS

Many colleges are offering reading-improvement programs. In a survey of higher institutions in the United States in 1955, 57,000 students were reported to be taking reading-improvement courses. However, fewer than 25 per cent of these institutions reported an existing reading program, and only one-third of the total student population were participating in such a program. The reading-improvement work is offered most frequently in the English department, with education, counseling, and guidance departments close seconds. There is wide diversity among these programs in organization, content, and methods.

In college, as in high school, instruction in reading may be given as an intrinsic part of the freshman program, on a par with other subjects. Everyone takes it. Classes are sectioned according to the students' initial reading ability. Reading instruction may also be offered as a service on a noncredit basis to any students who want to take advantage of it. Or it may be required of all students who fall below a certain level on the reading test given at college entrance.

In content, too, reading instruction in colleges varies widely. In some situations the emphasis is almost exclusively on "speeding your reading"; other programs stress the deeper interpretation of meaning. There is also a wide range in comprehensiveness; some programs depend mainly on the use of several gadgets, while others include instruction and practice in every aspect of reading. The multiple-emphasis program, which does not

concentrate on one reading skill, such as speed or vocabulary, but helps students to perform all their diverse reading tasks more efficiently, is obviously the kind of program that should be widely introduced.

At Harvard University, the Bureau of Study Counsel conferred with 300 students individually in the course of a year, and enrolled over 3,000 in the reading classes during a five-year period. The development of reading competence is a task challenging the entire college staff [22].

Ten Minutes at the Beginning of a Period. A simple way to begin instruction in reading is to spend ten minutes of every freshman English period reading 1,000-word articles on the reading process [62]. The students are timed on their reading of each exercise. They also test their comprehension, make a graph of their progress, and discuss the conditions and methods that bring the best results. In this way all the freshmen are given instruction in reading which can be applied immediately to all their subjects.

One-minute drills, given at the beginning of the period twice a week in one regular English class, seemed to aid reading improvement [2]. The selections were taken from the class literature book and from magazines like the *Reader's Digest*. Students counted the words they had read in one minute and reported their comprehension of main ideas and specific details. With this small expenditure of class time the students more than doubled their reading speed without loss in comprehension; they also became more aware of the need to vary their reading speed according to the material and their purpose in reading it. After three months of this practice one student commented: "I speed up when the stuff isn't important and slow down when it is" [2, p. 356].

First-semester Courses in Reading for All Students. After experimenting for two years with a developmental reading course, Miriam Schleich found student response so favorable that the course was included as a regular part of the college program [57]. Beginning with student interviews to discuss test results and reading problems, the course used various practice materials—Strang's *Study Type of Reading Exercises,* Norwood's *Concerning Words,* Perry and Whitlock's *Selections for Improving Speed of Comprehension.* The program changed each year in accord with students' needs and suggestions; new instruments and techniques were introduced. One of the major problems in classes of this kind is how to individualize instruction.

Focus on Functional Vocabulary. The Cornell University reading program emphasized the importance of accurate interpretation of the subtle and complex meanings of words [42, 44]. In order to enlarge their functional vocabularies, the students analyzed words in context and studied the structure and derivation of words. They examined difficult words that occurred frequently in textbooks and analyzed them for clues to meaning. Each meaning so derived they applied to the context and noted its contribu-

tion to the meaning of the whole passage. *The Improvement of College Reading* by M. D. Glock was used as a text.

The performance of students in the experimental group exceeded that of the control group on equated forms of the Cooperative Reading Comprehension Test, in both vocabulary and speed of comprehension. They also significantly surpassed students in the control group on three measures of academic achievement.

Focus on Meaningful Reading of Long Assignments. The Harvard program as reported by Perry consisted largely of continued practice with long assignments for two semesters [49]. On the initial diagnostic standardized reading test, the entire reading class scored above 85 per cent of freshmen in general. But, it was found, the possession of reading skills as evidenced on conventional reading tests is no guarantee that students can accomplish the crucial task on the college level—reading long assignments meaningfully. On the thirty-page chapter, "Development of the English State," read for twenty minutes, their performance on a multiple-choice test was impressive. But to the question: What is the chapter about? only one in every hundred showed that he had grasped the central thought concerning the growth of institutions. Their methods of reading and study were obviously inadequate. Most of these able students read far below their potential. Consequently, the reading course, while including instruction on the mechanics of reading, had as its central aim the meaningful reading of long assignments of difficult college material.

Accent on Machines. Entirely different in emphasis was the course given in the English department at Purdue University [17]. This course depended to a great extent on machines and was a degree requirement in some departments. The classes met for an hour twice a week for fifteen weeks.

As to the content and method of the course, there were three main activities: (1) sixteen Purdue reading films and check tests once a week, (2) sixteen essay and check tests, and (3) practice with a reading accelerator or pacer during each laboratory period. These activities, common to all classes, were supplemented by counseling, vocabulary study, and other exercises. The sessions were devoted almost exclusively to reading and to brief individual conferences. There was little discussion. Each student was held responsible for his own progress and for keeping his own records. A large gain in speed—319.5 words per minute—and a gain of 9.1 points in comprehension were reported on the essay tests.

In another report of the same program the achievement on the Survey Section of the Diagnostic Reading Tests of 204 students voluntarily enrolled was compared with the achievement of a control group [16]. Small groups were also retested fourteen months later. It was concluded that speed of reading could be significantly increased by a program of this type.

Reading comprehension remained about the same as before. About 60 per cent of the speed gained during the program was retained after fourteen months. One question left unanswered was whether the gains made in the program were transferred to day-by-day reading assignments.

Emphasis on Group Discussion and Group Work. In a program reported by Dotson [21], films, tachistoscopic practice, and selected workbooks were used with students grouped according to reading skill. However, the primary emphasis was on the reader as a person—the way he feels about his reading and the personal meaning he attaches to reading and improvement in reading. Through group discussion, students were reassured that they were not alone in having reading problems; from others they gained understanding of their problems and suggestions for handling them; in turn, they had opportunities to help others.

Group Psychotherapy Applied to a College Reading Program [43]. In one study, the experimental group was given ten weekly 1½-hour group therapy sessions conducted by a clinical psychologist in place of one of the regular reading sessions. The control group had one hour of individual reading work in place of the group therapy. An elaborate battery of tests included the Wechsler Adult Intelligence Scale, Diagnostic Reading Test Battery, Form A, McDonald-Byrne Reading Versatility Inventory, Michigan Vocabulary Test, several personality tests, and a semistructured diagnostic interview.

The therapy group made statistically significant gains in reading speed and in flexibility of reading. Their comprehension scores also showed improvement, though the difference was not statistically significant. Improvement in grades was also noted, and this improvement was maintained a year later. As to personality factors, the posttreatment results suggested a reduction in the discrepancy between self-concept and ideal self, an increase in self-assurance and independence, and a clearer recognition of the need for achievement.

A course called Growth in Vocabulary and a one-credit elective course, Reading for Comprehension, which aimed to teach students to read closely and critically, were included in the total reading program.

Johnson also described a program which involved the use of psychotherapy with good results [36].

Classes for Students Having Reading Deficiencies. Many programs of this kind have been reported; they will be described more fully in the chapter on Special Reading Groups (see Chapter 10). Glimpses of three types of courses will be given here—a fairly typical multiple-approach program, a laboratory type of program, and a program closely related to other courses in the college curriculum.

The *multiple approach* may be represented by the remedial reading class at Bowling Green State University [47]. Students ranking in the 25th percentile or better on the American Council on Education Psychological Ex-

amination and below the 25th percentile on the Survey Section of the Diagnostic Reading Tests were invited to attend the class, and others might be referred to the class. The course carried two hours' credit with a grade of S or U. It met three times a week for a one-hour period for one semester.

Each student's reading was appraised by means of a battery of tests—the Gray Standardized Oral Reading Paragraphs, a vocabulary test, an untimed comprehension test, the Keystone Visual Screening Test, hearing and speed tests, the Wrenn Study Habits Inventory, a reading history, and a personal-information questionnaire. The results of these tests were discussed with each student in a personal interview. Subsequent meetings were devoted to varied aspects of reading and study. The last three meetings were spent on evaluation. The students were retested, and wrote a personal evaluation of the course. In a final interview each student considered further efforts to continue his reading development independently.

This program is systematic and comprehensive. Provision is made for different levels of performance, and techniques and mechanical aids are introduced with the student's interest and motivation in mind. Interviews and informal class procedures make possible some individual guidance and counseling.

The remedial program described by Witty and others included a wide variety of procedures [69]. Of these, the students felt that the individual conferences, application of reading techniques to college assignments, and vocabulary building were the most helpful.

The *laboratory type of program* on the college level has been described by Triggs [64]. The main features of this program were a diagnostic study of each student; a personal interview in which each student planned his own program for improving his reading; and remedial exercises based on passages from current magazines. Students took responsibility for using the exercises indicated by their plan sheets and for recording their progress daily in individual case folders. The skills learned were transferred to college assignments. Every week the instructor suggested exercises and checked the student's progress.

Students also met in small groups to look at slide films or motion pictures, to discuss articles of common interest which they had read, and to discuss timely problems, such as how to take exams. They were encouraged to attend movies, plays, lectures, and discussions to broaden their background in communication arts. Each student terminated his work in the clinic when he and the instructor agreed that he had reached his goals.

A more experimental individualized college program whose stated goal was personality development through improved communication was reported by Ranson [53]. The reading-clinic students made significantly greater improvement in grades than did their matched controls; moreover, they continued to show improvement. Since the reading work was on a voluntary, noncredit basis, this group may have had a specially strong

motivation toward academic achievement. They improved more in rate than in comprehension.

Another laboratory-type course using a film, newspapers and periodicals, writing exercises, and other features emphasized the profit and pleasure to be derived from reading. Through a matched group experiment McGinnis obtained evidence of the effectiveness of the work in the reading laboratory at Western Michigan College of Education [10, 45].

A highly individualized program based on initial diagnosis was reported by Jones [37]. Each carefully supervised student used a given gadget or exercise only when he was ready for it, and only as long as he needed it. Special attention was given to the student's reason for reading a particular book or using a particular practice exercise, and to the problem of concentration.

Reading instruction geared into the college curriculum may be illustrated by the program initiated by Dean Hawkes many years ago in the undergraduate college of Columbia University. Students needing help were selected on the basis of test scores, faculty judgment, and marks for the previous term. In the initial meeting the worker explained the nature of the service and arranged time for further group testing and for discussing the tests to ascertain specific needs for improvement. The students met in small groups for a forty-five-minute period twice a week, and had half-hour individual conferences once or twice a week.

The worker had access to students' cumulative personnel records, as well as to the admissions and test data. If the student showed signs of visual defects, he could have a thorough eye examination at the eye clinic; if the need for additional tests was indicated, these could be obtained from the Columbia testing bureau.

Very few of the students had serious difficulties in the mechanics of reading. Their main problem was one of adjustment to college reading requirements. Many of them had been able to meet high school scholastic requirements with a minimum of reading; however, when they entered college they were faced with an extremely difficult reading program. They had no foothold in experience or background that enabled them to grasp such abstract ideas as are presented in the works of Marcus Aurelius, Plato, and other philosophers. To supply background, the instructor obtained the cooperation of the librarians in compiling a special reading list of simpler books giving information about the lives, times, and contributions of such authors.

At the beginning of each period the worker gave the students one exercise from *Study Type of Reading Exercises* [62] and timed them on the reading. She used different types of comprehension tests, depending upon the needs of the group—outline, summary, essay tests, short answer. Those who continued for a second semester read another series of more difficult selections, comparable to those found in college books in varied fields [13].

To orient the students to reading and study methods in general, the instructor asked them to describe their methods in studying an assignment. Then she gave them five minutes to look over the pamphlet *How to Read Rapidly and Well* [71], to see how many ideas they could find that were applicable to their own situation. They discussed the most important points in this pamphlet and considered how to incorporate them into their own reading and study program.

During most of the periods the instructor used the students' assignments as practice material. The analysis of paragraphs is an important skill required here. When the paragraph is packed with subordinate ideas explaining or discussing the main idea, an over-all understanding of them is important. But there are always one or two points that stand out as necessary. The teacher should give the student practice in finding these quickly as he reads. This may take time and patience on the part of both instructor and student, but it is well worthwhile. The relative importance of various ideas must be considered and determined.

Outlining is excellent practice for the student. It is hoped that he will, in time, learn to get the organization of a chapter or article as he reads, without having to transcribe it into a written outline.

If some members of the group finished their reading before the others, they made use of the time by reading interesting magazine or newspaper clippings for which comprehension questions had been prepared. These clippings covered a number of areas, and frequently stimulated students to read further along similar lines.

These periods were kept flexible; they were constantly adapted to the varying needs and interests of the students, who shared with one another the methods that proved successful and summed up the main points of every extended discussion.

In the individual conferences the aim was to deal not so much with a reading difficulty as with a person who had a reading difficulty. The instructor did little talking; the student usually showed that something was bothering him—embarrassment at having to have help in reading, anxiety about passing his courses, loneliness, inability to make friends, homesickness, the feeling that the challenge of college was too much for him, relations with girls. Cooperation with the college staff was invaluable. Whenever possible, the instructor met subject instructors or advisers to discuss each student, exchange information, and develop plans.

The results of objective reading tests plus the comments of the students, their rate-of-reading graphs, and their day-by-day outlines supplied a basis for the evaluation of their work. Other indications of progress were improvement in class work noticed by instructors, and the reading teacher's daily record of each student's work.

From the students' standpoint, the aim of this special work was to acquire reading skills that they needed immediately in order to cope with a

college curriculum requiring extensive and difficult reading. The instructor, in addition, concentrated on understanding the individual student and the deeper problems underlying his reading difficulty and adjustment to college.

Evaluation of College Reading Programs. On the whole, college reading programs have been more adequately appraised than those on lower educational levels. Every program seems to get results. Improvement in reading is reported for programs using machines and for non-machine programs, for large and for small classes, for instruction and for drill programs, and for group therapy. However, very few of these studies measure the continuing effects of the course, six months or later; few measure adequately all the possible outcomes; few compare the gains of the special reading class with those of a properly controlled group.

Desirable Features of College Reading Programs. There seems to have been a trend in college reading programs away from machine-oriented skill-drill courses and group teaching procedures, and toward the guidance approach to reading improvement. At the present time most college reading courses should include these three features: (1) the teaching of the reading and study skills that all students need, either in a scheduled course or in each of the content fields; (2) special reading classes or laboratories for those who come to college deficient in reading ability; and (3) individual counseling on reading and study problems.

With respect to the first aspect—reading in the content fields—the reading specialist can talk with each member of the faculty individually to find out what he is now doing to help students read his subject better. He will present himself as a helpful person—as an available resource or consultant. The head of some department may ask him to come to a departmental meeting to help devise informal tests in that field, to discuss the reading skills students need in that subject, to demonstrate techniques of instruction and practice in reading. Other teachers may come to him individually; some may get interested by working with him on an individual case which they have referred.

To ensure that all students acquire basic reading interests and skills, the reading specialist may introduce a course in reading or communication skills in the regular freshman program, as a section of freshman English or as a major part of an orientation course taken by all students. This course should be of a practical laboratory type, not a lecture course. It should be concerned with personal development through reading as well as with reading development.

TEACHER–EDUCATION PROGRAMS

In colleges and universities the reading specialist may have responsibility for the preparation of teachers of reading. Programs of this kind serve

the dual purpose of helping high school and college students improve their reading, and of giving practice to graduate students. Sheldon described a two-credit reading and study course for freshmen and upperclassmen, taught by graduate students in education and psychology [58]. These student instructors prepared for their teaching by participating in a seminar on reading methods. They met their students in individual conferences as well as in groups.

A number of summer programs have trained professional reading teachers through service to elementary and high school pupils in a reading center. Classes are conducted five days a week from nine to twelve during a six-week summer session. Advanced students in the field of reading work under supervision with individual cases and small groups of retarded readers who are seeking help at the reading center.

A recent survey was made by one of the authors showing the need for courses in the teaching of reading in high school and college. Only six or seven institutions offer a program of several courses for the preparation of high school and college teachers of reading; more give a single course or a general plus a more specialized course. Clearly indicated was the need for at least one excellent course for all prospective elementary and secondary school teachers in how to teach reading, improved opportunities for practice teaching, and an intensive program for preparing reading consultants.

ADULT READING PROGRAMS

In recent years adults in all walks of life have become tremendously interested in increasing their reading efficiency. Many classes for business executives, employees, and other adults have been formed. These programs have this advantage: the students are strongly motivated to increase their reading competence. Their varied needs call for individualized instruction and specially devised exercises based on the kinds of reading they have to do [4]. Prominent executives and research chemists, among others, have expressed appreciation of courses in reading and writing based on sound psychological principles.

Cleland was optimistic about the ability of adults to improve their reading [14]. When retested six months after the completion of reading improvement classes, they had retained their newly acquired gains in rate and comprehension. It would be highly desirable if more graduates of machine-dominated courses were subjected to this test of permanence. Extensive reading programs have also been developed in the Armed Forces [70]. In the beginning, many of these courses chiefly used the machine approach, with emphasis on increasing speed of comprehension [59]. Some of the earlier results with machines have been discredited because the tests of comprehension were inadequate and there was no follow-up to see

whether the gains reported at the end of the course persisted. More recently, printed practice reading exercises and other procedures have been used in addition to the reading-rate controller and tachistoscope [1, 26].

The need for more careful evaluation of reading programs was pointed out by Reed [54], especially the importance of equating experimental and control groups on the basis of initial motivation. As in the school and college programs, the best results should be obtained when the individuals are highly motivated, set specific goals for themselves, take initiative in planning for improvement, and see objective evidence of their progress.

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CHAPTER 3

Total Program for the Improvement of Reading

The reading program is like a suit; it must fit the individual. Situations vary from one school or community to another. The following are snapshots of situations described by teachers in different parts of the country.

Situation 1: Ability but Lack of Interest in Reading. In a lumbering town in the West, the parents of the high school students are mostly well-paid mill workers. They want their children to read well, but do not set them a good example. The children are bright enough but are not interested in reading. Because they lack basic skills they find reading laborious, slow, and tiresome. They see little sense in reading when they can look at pictures and television. They are interested in outdoor entertainment, movies, and dances. Every boy wants a car; many get jobs in order to maintain a car.

They need to begin reading in low gear, with stories related to their outside activities—stories that supplement and elevate their own interests.

Situation 2: Low Ability and Too Difficult Books. In a ninth-grade class all the pupils had failed in one or more subjects the preceding year. Their IQs on a group intelligence test were mostly between 80 and 90. The girls were interested primarily in boys; the boys were interested primarily in sports. Most of their parents were manual or semiskilled workers.

Shakespeare's *Twelfth Night* was required reading. These pupils were ill equipped to handle the vocabulary, the seventeenth-century expressions, the metrical form, and the philosophical passages. Their initial interest in the story soon faded. The required novels, *Ivanhoe* and *Silas Marner,* caused almost as much difficulty. The pupils missed subtleties of plot, style, and characterization. They soon lost interest in even trying to understand

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the words, let alone the ideas. Both students and teachers felt unhappy and defeated. The tabloid newspapers and the insipid books they had chosen for themselves had not prepared them to read these pieces of literature. They needed a transition from where they were to where they could go in literary appreciation.

Situation 3: All Able but Many Bored. The boys in a private boarding school are above average in intelligence and socioeconomic status. Some read well and discuss intelligently what they have read. Many are bored; they read aloud without feeling and do not know what they have read. Since many of these boys come from broken or unhappy homes, stories that deal with personal relationships and other aspects of child development may have much personal value to them.

Situation 4: Instruction in Reading Needed in Study Hall. As supervisor of study hall and library, one teacher became aware of the varied reading skills and abilities of the boys in a private school. Their ages ranged from eight to fifteen in grades 3 through 9. Their general intelligence, interests, and socioeconomic background were well above the average.

Many of the boys in the upper classes did not seem to know how to make use of the two-hour study session. Their reading was purposeless. Unless the assignments were very definite, they accomplished practically nothing. At least three of these boys seemed to have basic reading disabilities which were hampering them in all their schoolwork, yet nothing was apparently being done to remedy their reading deficiencies. The supervisor's duty consisted almost entirely in keeping order.

Much can be done in this situation to make purposeful reading a key to learning. Readers with the same general deficiencies should be grouped together so that the supervisor can give them help with their reading problems as they occur. Other times may be scheduled for individual help as needed. Occasionally a film on reading may be shown (see Appendix B), or group instruction that is needed by all those present may be given.

Situation 5: No Recognized Need for Reading in Their Lives. Many of the students in this situation disliked reading. They read assignments and worked hard to master them, but seldom browsed around the library or read in their leisure time. They seemed to have no need for reading in their lives, except to get their studying done. One reason for this lack of voluntary reading was their difficulty in comprehension; another was their slow rate of reading. They enjoyed stories presented on television and radio but did not like to read them. What, they thought, could reading give them that television and radio could not? They were not aware of the special values of reading—a wider selection of stories and more opportunity to use the imagination.

In these and other situations many teachers and counselors view the reading problem with alarm; responsibility for reading improvement has been suddenly given to them and they are quite unprepared for it. Teachers

in colleges and universities report the same kinds of reading problems. They frequently mention (1) the slow reading of many students, which makes it impossible for them to complete the long college assignments; (2) the inadequacy of their comprehension, especially their inability to recognize the organizing idea in a passage; (3) the shallowness of their appreciation of literature; (4) their limited vocabulary; and (5) their failure to use appropriately a repertory of reading and study skills.

Reading-improvement programs follow many different patterns. Each school must choose and develop a program in the light of its students' needs and the facilities that are available. Any program may combine certain features from any of the types of programs listed below (see Chapter 2).

TYPES OF PROGRAMS

1. *Every Teacher a Teacher of Reading of His Subject.* In this teacher-centered program every teacher gives instruction and practice in common reading skills as well as in the special reading approach, key vocabulary, and specialized reading skills required in his subject. To be successful, this type of program needs teachers who are interested in reading and not over-burdened with other duties, a principal who is enthusiastic and informed about the reading problem, and a reading consultant who presents himself to the teachers as a helping person. Since many teachers have not been prepared to teach the effective reading of their subject, it is necessary to offer workshops, study groups, or other forms of in-service education.

2. *Special Sections of Subject Classes.* In large schools there are special English sections for the most retarded and for the most able readers. Here students are given reading materials and instruction that are appropriate to their ability. If the retarded readers meet the minimum English requirements for the grade, they are given credit for the year's work in English. The gifted read beyond the grade requirements and apply semantics and logic on deeper levels of interpretation.

3. *A Core Curriculum.* Under this plan the teacher is given a larger block of time with one group in order to offer special instruction and practice in the kinds of reading that are required in the course.

4. *A Developmental Reading Course for All Students.* This kind of program is an intrinsic part of the freshman schedule. It usually includes study skills and is sometimes introduced in college as a course in communication—reading, writing, speaking, and listening.

5. *An Extra Course for Retarded Readers.* This course may be either required or offered on a voluntary basis, with or without credit. Many reading programs have started with a course of this kind. Sometimes it is scheduled after school hours, sometimes during study periods, and sometimes as part of a regular class.

6. *Individual Help in a Reading Center.* Diagnostic information is usually obtained before or during the periods of instruction. In some instances

the student is responsible for selecting the practice material he needs and checking his work.

7. *Clinical Service.* This usually involves a staff comprising a psychologist, a psychiatrist, a reading specialist, or other specialized personnel. The completeness and intensiveness of the service vary in different situations.

A reading program usually combines various features of several of these patterns. In any program the subject teacher carries responsibility for teaching the reading of his subject. In most schools and colleges there is need for a developmental course for all students at strategic periods—the beginning of junior high school, of senior high school, and of college. Seriously retarded readers should receive special help individually or in small groups. In a smaller number of cases, reading problems are so complicated with emotional disturbances that clinical treatment is necessary.

HOW TO GET STARTED: LEARNING AND WORKING TOGETHER

"I should like," an English teacher said, "some information on how to set up a reading program on a small scale with a limited budget. What are the essentials for such a program? If a good beginning is made, perhaps more funds could be obtained for further developments."

Let us study the process by which a reading program gets started. Sometimes it is the parents who demand better instruction in reading. Sometimes the administrator wins the support of the public by presenting facts showing the need for improvement in reading, or by recounting success stories of students who have been helped by instruction in reading. Often it is the teacher who becomes concerned about the reading problem and determines to do something about it. An English teacher might well spend a year experimenting with basic reading instruction in his own classes. During the year he can tell other teachers about some of his most successful procedures. Students in his classes will also talk about the help they have received.

As a few teachers who represent different content fields become interested, they may form a reading committee to study the problem. They may invite several students, the administrators, the librarian, selected lay persons, and any available specialists to join them. If one or two teachers who are opposed to the newer ideas in teaching reading are asked to serve on the committee, they may become interested. Such a school or interschool committee may assume leadership in developing a reading program that grows out of the needs of the students and the educational objectives of the school.

The committee may work first on such a problem as how to help all entering ninth-grade pupils gain the necessary proficiency in reading for success in high school. Each member contributes his ideas and builds on the suggestions of others. They agree on certain goals. Individuals volunteer to serve on small action committees to carry out parts of the program,

such as obtaining and summarizing comments from graduates on the reading problems they have met in college or in later life and suggestions as to what the high school might do about them; obtaining the help of the librarian to select reading materials that will meet the needs of all the pupils; helping the teachers improve their methods of teaching the reading of their subjects. Primary teachers who have had some special preparation in reading would be valuable members of this committee. Other committees may be concerned with administering, interpreting, and using intelligence and reading tests and with creating interest in the reading program in the school and in the community. At various times during the year all the subcommittees meet to evaluate the reading program and to recommend ways and means of improving it.

In the meantime, in meetings on curriculum development, the principal may point out the relation between reading and other aspects of the high school curriculum. The teachers may not have recognized that the reading skills they have been discussing constitute a reading curriculum or the beginning of a developmental reading program.

The work of the voluntary committee during the first year may pave the way for further study and development of the reading program through preschool workshops, demonstrations of classroom methods, visits to other classes, a series of departmental meetings or regular factulty meetings devoted to reading, or small voluntary study groups on students' reading problems. In all of these meetings the leader should approach the problem from the viewpoints of both students and teachers—how improvement in reading helps students succeed and makes teaching easier and more satisfying. Through these in-service education experiences, every member of the school staff will become aware of his responsibility for helping all the pupils read more effectively. He will acquire a deeper understanding of the reading process and develop a reservoir of procedures from which he can draw.

To summarize—the first steps in developing a reading program are (1) to find one or more persons who are interested in the improvement of reading, (2) to experiment in regular classes, (3) to introduce reading problems into the regular in-service education program, (4) to enlist the aid of the librarian, (5) to form a committee or study group of interested persons, and (6) to obtain a reading specialist or consultant as the need for one is realized.

WHEN TO FIND TIME FOR READING INSTRUCTION AND GUIDANCE

Reading may be taught (1) incidentally or systematically in all class periods, (2) as a regular subject in the freshman program, (3) in a second period of English, (4) in a communication-arts or orientation-to-learning class, or (5) in a special reading class.

In All Regular Class Periods. Reading instruction may be given in each subject. This should be done whether or not more specialized reading services are available. In one high school, each department worked out materials and methods for the improvement of reading in its own subjects. When representatives of each department reported on their most successful procedures, the faculty as a whole gained a sense of the basic reading skills common to all subjects and of the specific skills which required special attention in their classes.

In Regular English Classes. Basic instruction in reading may be given in the core course or in English classes that reach all the students. The teacher who assumes this responsibility needs a special knowledge of reading, plus skill in recognizing and providing for individual differences. To provide learning experiences in regular classes for pupils representing a wide range of reading ability is indeed a challenge. In some colleges, the freshman course in reading and writing has been broadened into a course in the communication arts, including speaking, radio and television listening, and other aspects of communication [12].

In Special English Classes. In a large school, students taking English may be sectioned according to their level of reading ability or the nature of their reading difficulty. Such a program can be carried out with little additional expenditure of money. In these classes the pupils discover and work on the specific phases of reading in which they need to improve. Each teacher builds up files of practice exercises and recreational reading suitable to his group; he does not have to provide such a wide range of material as is needed in the usual heterogeneous class. The pupils get English credit for their work in these classes.

Whether to form these classes on the basis of reading ability is still a controversial question. The arguments in favor of so-called homogeneous grouping are that (1) it makes it easier for the teacher to provide the experiences and materials of instruction which each group needs; (2) it does not waste the time of or bore the superior readers; (3) it does not undermine the self-esteem of the poor readers by throwing them into constant comparison with the superior readers; and (4) there are few teachers sufficiently gifted to make adequate provision for the wide range of reading ability represented in an ordinary class.

Some arguments against homogeneous grouping are that (1) poor readers need the stimulation of better readers; (2) better readers need to learn to understand and to be of service to others; and (3) being in a "low" group may give students a feeling of inferiority. One solution is to continue the ordinary heterogeneous class and introduce flexible subgroups and periods of individualized reading in the regular classes to meet varied needs and interests. This arrangement preserves the merits of both kinds of grouping.

In a Reading Period Scheduled for All Students. Five minutes cut from each period will provide thirty minutes a day for a reading period.

Another plan is to assign a full period twice a week for reading instruction. More and more, high schools and colleges are introducing a developmental reading course that runs for six weeks or a semester. Students may be assigned to these classes on the basis of their scores on a reading test. In this plan, reading instruction is scheduled as an intrinsic part of the curriculum. The quality of the instruction, however, depends upon whether the teachers are prepared for this new assignment.

In Homeroom Periods. Part of a thirty- or fifty-minute homeroom period may be used for reading practice and instruction focused on the immediate reading and study problems that are recognized by the students.

During Pupils' Study Periods. Special reading groups for pupils who fall a year or more below their potential reading ability have been successfully scheduled during study periods. This is much better than taking pupils out of their regular classes or scheduling this special help after school hours. If there is close coordination between the regular class and the special reading groups, the students will use in the regular classes the skills they have gained in the reading classes. (For further discussion of the special reading group, see Chapter 10.) Actually, time should be provided in several of these ways.

WHO SHOULD BE INCLUDED?

The question of who should be included in the reading program has already been partially answered—every student. Everyone can improve his reading in some respect.

The "problem children"—those with low IQs, poor attendance records, disciplinary history—usually have reading difficulty. In fact, their problems may stem partly from their failure in school. They need a curriculum in which they can learn things useful in their lives through avenues other than reading. But they also need diagnosis and instruction in reading to help them discover and develop their latent reading potentialities. Gifted children should be included in the reading program also. Few have realized their potentialities; they can improve in study methods, reading efficiency, reading tastes, interpretation, critical reading, appreciation, and application of what they read.

CONDITIONS CONDUCIVE TO THE IMPROVEMENT OF READING

Some school conditions create reading problems, while others contribute to reading development and thus to personal development.

Physical Conditions. Immediate attention should be given to conditions that bear upon health in general and eye hygiene in particular. Some students do not read so well as they might because of physical discomfort.

Length of line [5, 27] affects readability; so does brightness contrast between print and paper [30] and print [27].

Classroom illumination should not be ignored, though its relationship to reading efficiency has not been clearly determined. Some students may have their efficiency and pleasure in reading unfavorably affected by poor illumination: some classrooms and libraries are dark and dingy with uncomfortable chairs and varnished tables that reflect the light into the reader's eyes. One basic contribution that administrators can make to the improvement of reading is to provide optimum conditions for visual efficiency and comfort: 12-point or larger type on white but not glossy paper; indirect lighting approaching fine daylight conditions of at least 15 to 20 candlepower; and freedom from preventable glare [25, 26, 30]. There should also be frequent brief periods of rest or relaxation from reading [15, pp. 370–384].

Psychological and Social Conditions. Three types of conditions or factors are conducive to improvement in reading:

1. Interpersonal relations in the classroom—friendly, helpful teachers who respect and try to understand each student; friendly classmates who take a constructive attitude toward one another, who enjoy being together, and who learn from one another; and avoidance of an overtense, competitive atmosphere. Such relations help students to learn. One twenty-year-old, when asked why he liked the reading center, said: "It's a heart-warming place where everyone is so nice to us, and it gives us confidence in ourselves and in our work."

2. Experiences in which each student can succeed with reasonable effort —differentiated assignments on which students work individually or in small groups; activities, projects, and goals chosen by the group, which make reading necessary and meaningful, serve some social purpose, are identified with some aspect of the student's growth, and are accompanied or followed by satisfaction.

3. Expert instruction which includes diagnosis of each individual's interests, need for reading, present reading status, difficulties and their causes, as well as specific instruction in the techniques of reading. Such instruction helps the student to learn with a minimum of failure. Conferences with students give teachers opportunity to discuss individual reading programs and ways of improving them.

ESSENTIALS OF ORGANIZATION AND ADMINISTRATION

The essential features of a reading program have already been suggested; they need be only briefly summarized here: (1) basic instruction in reading for all pupils, as an intrinsic part of the curriculum, for certainly the reading problem cannot be solved either by keeping retarded readers at their reading grade level or by promoting them by age without teaching them

to read or modifying the curriculum to meet their needs; (2) guidance and instruction in reading in each subject and in recreational and other unassigned reading; (3) assistance to seriously retarded readers, individually or in small groups; (4) cooperation of the library in supplying suitable reading materials; (5) in-service education of the entire staff; and (6) provisions for obtaining the necessary financial resources.

ESSENTIALS OF STAFF

Dever reported positions in the field of reading, ranging from full-time reading specialists to teachers having a minimum responsibility for the improvement of reading [6]:

1. Those who work directly with children and young people: reading specialist, remedial-reading teacher, reading clinician, reading teacher

2. Those who direct or supervise others in reading work: reading director, reading consultant, reading supervisor, reading coordinator

3. Those whose reading responsibilities are in addition to or a part of other work: adjustment teacher, helping teacher, visiting teacher, classroom teacher, instructor or professor in college, counselor, psychologist

However, everyone in the school contributes to the improvement of reading. Let us examine in detail the work of every member of the school or college staff.

Administrator's Concern and Responsibility. "Reading is the most important problem in junior high schools today." This is the opinion of one able junior high school principal—an opinion shared by many other administrators [32, 33].

In attempting to raise the general level of student achievement in reading, administrators must be aware of unfavorable conditions: many high school teachers have heavy teaching schedules and large classes; they lack special training in reading; there are but few specialists in reading to serve as consultants, to give diagnostic reading tests, and to do intensive work with seriously retarded readers; facilities for collecting physical defects are inadequate; there are not enough suitable reading materials for students of diverse interests and abilities, many of whom come from poor cultural backgrounds and environments that do not stimulate them to want to learn by reading.

Having recognized the scope of the reading problem and the difficulties involved, the administrator tries to create conditions that make effective reading possible. He initiates planning for improved procedures, uses the resources of his own staff and of the community, and encourages all those involved to engage in continuous evaluation of the program.

The aim of the administrator is to provide the experiences every pupil needs to improve in reading. Following are some do's and don'ts for administrators [23]:

DO	DON'T
Do encourage the teachers to talk about the reading problem as they see it, and what they think should be done; develop the program cooperatively.	*Don't* tell the teachers what *you* think ought to be done and how they should do it or try to "sell" your program to them.
Do go "wisely and slowly." After talking with individuals, introduce the subject of reading at a carefully planned, well-organized conference; support the program with know-how as well as with personal enthusiasm.	*Don't* introduce the subject hastily and prematurely; don't schedule reading groups before teachers are ready for them. Don't suddenly say, "Let there be reading classes!"
Do use faculty meetings, workshops, institutes, and other *regularly scheduled* means of in-service education for helping all members of the staff to gain an understanding of their contribution to the total-school reading program.	*Don't* schedule special meetings on reading after school hours; try to schedule these meetings during the school day or in a preschool conference.
Do schedule time for reading instruction during the school day.	*Don't* expect extra work in reading to be done by students in outside-of-school time.
Do find out about the good work in reading which some teachers are now doing and give them recognition and approval for it.	*Don't* assume that teachers are at present doing nothing about reading improvement and that you have to start from scratch.
Do explore the resources in your staff: (1) elementary teachers who have had experience and training in beginning reading, (2) teachers who have taken courses in reading on the secondary level, (3) teachers who have had some training in testing and guidance, (4) teachers who are interested in the reading problem and are planning to learn more about it, (5) guidance workers who can furnish information and can counsel certain reading cases. Give each member of the staff work that will use his special knowledge and abilities. Keep informed about the reading program and the backgrounds and needs of the students.	*Don't* go ahead without finding out what interests and special contributions individual members of the staff can bring to the improvement of reading.
Do employ a reading specialist who is well qualified by personality, as well as by training, when the staff feels the	*Don't* put a teacher with no training in reading into a position of responsibility in the reading program,

DO *(Continued)*	DON'T *(Continued)*
need for more expert help. Delegate responsibility for developing and evaluating the program.	and *don't* employ a well-trained person who nevertheless cannot get along with students, teachers, and parents.
Do be appreciative of the good reading work which some members of the staff are doing.	*Don't* seem indifferent or unappreciative, or dominate committee deliberations.
Do move heaven and earth and the school board to provide the reading material needed because of the wide range of reading ability and interest represented in every class.	*Don't* expect teachers to "make bricks without straw"—to teach reading without suitable materials of instruction.
Do see that the school library is well staffed, equipped, and organized, so that all instructional materials and books, films, recordings, maps, globes, pictures, and magazines are readily available for use by teachers and students. Promote the effective use of these materials.	
Do permit the reading specialist in the school to decide upon the procedures and materials to be used in special reading classes.	*Don't* insist that certain methods and materials be used simply because they are reported to have resulted in impressive gains in some other school.
Do obtain motion pictures and slide films on reading, and have a screening test of vision given to all pupils. If you have the money, get certain machines for individual, clinical use.	*Don't* spend money on pressure or pacing machines until you have obtained suitable reading materials for all pupils.
Do use community resources to get what the teachers want and need.	*Don't* isolate the school from the community; listen to the parents; interest them in reading improvement.
Do develop a community school, serving adults as well as children and young people.	
Do interpret reading to the public as a means to an end—well-informed citizens will be better people.	*Don't* interpret reading to the public merely as a skill to be learned or as an end in itself, but rather as a means to a better life.

In-service education is an important responsibility of the administrator. It may take the form of informal personal conferences when a teacher has an immediate question or problem, faculty conferences on reading, and case conferences in which certain members of the staff pool their information about an individual student, interpret it, and make suggestions for helping him. Subject teachers in each department may use their de-

partmental meetings to discuss reading and to share effective procedures that they have worked out. It is also helpful for teachers to observe the reading teacher working with his small group or with their own classes, or to hear and discuss tape recordings of gifted teachers at work.

The Role of Every Subject Teacher. Since reading is involved in every subject, it is inevitably part of every teacher's work. Yet many teachers ask questions such as: How can I incorporate the teaching of reading into my biology [or other subject] classes? Should I neglect the teaching of biology for the teaching of reading? What can a teacher do in a classroom where students of widely varied ability have to use the same textbook, which is too difficult for many of them? Unless teachers make reading instruction an intrinsic part of their teaching, students are likely to waste their study time. When this happens, the teachers become frustrated; they feel they cannot teach if the students cannot read. What *can* the teacher do?

1. The results of a standardized test show a teacher the range of reading ability that is represented in his class. By means of informal tests and inventories based on selections from the books the students are expected to read, the teacher can learn a great deal about each student's ability to read the subject (see Chapters 14 and 15).

2. The teacher can teach effective study-type reading of factual material. The formula "Survey Q3R" really works: survey what you already know; raise questions about what you want to know; then read, review, and recite. The Coronet film *How Effective Is Your Reading?* illustrates this procedure.

3. He can give instruction and practice in the special approaches needed for the reading of different types of material—poetry, novels, plays, a science textbook, history, mathematics, art, home economics, shop.

4. To provide for individual differences in mental ability within a class, the teacher may ask students of different ability to report on different aspects of the story or chapter. Those lowest in reading ability may answer simple questions of fact, find certain significant details, or report the plot or main sequence of events. Those with high ability may be asked to interpret the characters— why they behaved as they did, how they were feeling—and give reasons for these opinions. They may also be encouraged to make critical comments on style and content. By using different kinds of questions, the teacher helps students to develop different reading skills appropriate for them.

Through instruction in reading, teachers in every subject have opportunities to teach pupils to think. "What is your evidence for that statement?" "May new facts have been discovered since that book was written?" "How do you know that is a true story?" "What has been said on the other side of the question?"—questions like these help students to be more precise and accurate in their statements, to distinguish the true from the untrue, to seek and evaluate evidence.

5. The teacher can help the students master methods that are applicable in all subjects. In every subject the student should glance through the book, chapter, or article to get an idea of what the author is trying to do and how this content fits in with his previous knowledge and his present and future needs.

Understanding of the use of various reading aids—pictures, charts, and diagrams; indexes; tables of contents; footnotes; glossaries; chapter, section, and marginal headings; and questions—makes the difference between a rich understanding of the material and a vague impression. This quick appraisal of a reading situation and what it demands helps the reader to decide how fast to read and what to look for. This is the first step—orientation. Unless the student sets specific goals for himself before beginning to read, he may miss the most important ideas. If he is reading a key book in the field, he should try to grasp the thought of each sentence, the main idea of each paragraph, and the supporting details. He should read with an active mind, questioning, anticipating the author's ideas, testing them against one another and against his own personal experience. The author's pattern of thought or feeling should take shape against the reader's background of experience and knowledge in the field. He will be more likely to remember ideas if they are stated in the form in which he will use them and if he actually uses creatively the ideas he gains from reading; he learns what he uses. A positive and hopeful attitude toward oneself and one's reading, a felt need for the particular reading experience, and objective evidence of progress toward the goals one has set are likewise basic in all subject fields [9].

Instruction in the common reading methods may be given by one teacher—an English teacher or a special reading teacher. But no single teacher can solve the reading problem. In his own classroom every teacher should reinforce the common reading skills and teach the reading approaches peculiar to his subject.

6. By knowing the individual students and knowing books, the teacher can make personal recommendations for good reading; he can give the students class time to discuss the books they have been reading.

7. He can give some instruction and practice that will help the student acquire basic vocabulary and word recognition skills.

8. He can help students learn key words and acquire a precise grasp of the important concepts in his subject.

If specialized services are available, the teacher may refer reading cases that are complex or emotionally involved to the guidance worker or psychologist. "But," some teachers ask, "doesn't a teacher need specialized training to help any student to improve his reading?" The answer depends upon the level of proficiency on which the teacher wants to work. A good teacher who is friendly and understanding will help students improve their reading; he may even have developed some effective diagnostic and remedial techniques as a result of working with other students or through in-service education. As he becomes increasingly interested, he may take courses and do independent study to learn more about specific techniques of testing, grouping, offering instruction, and conducting case studies.

It is essential that teachers cooperate on the reading problem. Working together, teachers and students may compile vocabulary lists that will contribute to general reading ability as well as to ability in specialized fields (see Chapter 16). By conferring about their reading requirements, teachers

from different departments can prevent reading from becoming an intolerable burden to students. By encouraging students to undertake projects that cut across several subjects, they can enable a student to read widely on a topic of special interest to him.

"How can teachers of English and social studies be so motivated that they want to be teachers of the reading of their subjects?" administrators and reading consultants often ask. Knowledge of what to do and how to do it is a strong motivation in itself. Teachers especially appreciate knowing what other teachers are doing. They appreciate having reading consultants come into their classes to demonstrate procedures for teaching reading in their respective subjects. They also appreciate being given the reading materials that are needed by individuals or by the class as a whole.

Teachers become more enthusiastic and competent in teaching the reading of their subject as they realize the importance of reading as a tool of learning and as they see how students who improve in reading take greater interest and show greater achievement in their classes.

Praise is generally more motivating than blame. Teachers are people. They have a basic need for recognition and approval. Students, parents, administrators, and reading consultants should show their appreciation of the good work that teachers do in reading.

The teacher who really understands the complexity of the reading process will not use a single method, device, basal reader, or workbook; he will draw on his repertory of methods and materials to meet the needs of all his students, and he will be sensitive to the role of interpersonal relations in achievement. In addition, teachers might well learn how to improve their own reading. This has been done [14]. Such a course should be voluntary. For practice material, professional articles of intrinsic value to teachers could be used.

The Reading Specialist, Consultant, or Supervisor. If the reading specialist has been employed at the request of the teachers he has an initial advantage. In any event, he should work out plans cooperatively with the teachers and administrators. As in any effective group work, the leader should recognize individual differences, and help each person to feel that he or she has something to contribute to the program.

The reading consultant should recognize the good work which teachers are already doing. In every school there are creative teachers who have developed methods and materials to meet the needs of their students. Accordingly, the first step is to see what teachers are actually doing to help students improve their reading. This may be reported in a series of experience meetings in which the reading specialist may highlight and enhance each teacher's report.

In one school system the reading consultant developed the following in-service education procedures [31]. At first he taught reading to several classes, more as a means of gaining understanding of the situation than

for demonstration purposes. Gradually each class became the joint re-
sponsibility of teacher and consultant, and finally the teacher took major
responsibility, with the consultant helping him to appraise the process
and obtain the necessary reading material. Laboratory workshops—small
groups of teachers who were free at certain periods of the day—were or-
ganized to work on any aspect of reading instruction in which they were
interested: how to teach paragraph comprehension more effectively, how
to group students within a regular class, how to help the nonreading stu-
dents in their classes. Larger group meetings were occasionally called to
study common problems. The channels of communication were improved
between teachers and the psychiatrist or psychologist. Much concrete help
was given to teachers in creating reading materials, making original read-
ing games, and learning group procedures. The case-conference technique
was used effectively in helping teachers to collect, interpret, and use avail-
able information about individual pupils.

The main functions of the reading specialist may be summarized as
follows:

1. To work with and through the teachers as a helping person, consultant,
or resource person—not as a supervisor in the old sense of the word. He may
help teachers by (a) finding materials appropriate to their pupils' levels of
interest and reading ability, (b) giving them opportunities to observe in his
classroom, (c) developing with them more effective reading programs for the
core classes, and (d) giving them many concrete suggestions as to how to teach
reading.

2. To consult with administrators and others responsible for curriculum
development, marking and promotion policies, and methods of instruction; to
assist in establishing and maintaining voluntary teacher study groups and other
forms of in-service education.

3. To diagnose reading difficulties so that students may be appropriately
grouped or referred for special help.

4. To work with seriously retarded readers, or able learners who are not
realizing their reading potential, individually or in small groups, in close
cooperation with the classroom teachers. This work with individuals and small
groups seems at first glance to be an expensive service. But its value becomes
evident when one considers (a) the opportunity it affords the teachers to gain
understanding as they work with the reading specialist on these cases, and
(b) the opportunity it affords the specialist to develop materials and techniques
that can be used in regular classes. He reports to the administrator the progress
of all pupils who receive special help in reading during the school year.

5. To interpret to parents and teachers the students' reading needs and serv-
ices available. In conferences with parents he may explain the child's reading
status and suggest ways in which the parent may help the child by supplying
suitable reading materials for him at home and by helping him overcome per-
sonal problems which may be interfering with his reading.

6. To discover and use community resources (a) to create basic conditions
that make effective reading instruction possible—adequate diet, better home

relations, correction of physical defects, suitable reading materials; and (*b*) to supplement his own work as reading specialist with psychological, psychiatric, and guidance services, family casework, and medical and visual examinations and treatment.

The Librarian's Service. Perhaps no one is more keenly aware of the reading problem than the librarian; reading is his business. He is concerned with what people read, why they read, and how they read. In the school library he becomes aware of the aimlessness, ineptitude, and poverty of many students' reading. Librarians in schools and in public libraries offer children and young people many experiences that help them to become interested in books. Anna C. Moore, supervisor of libraries, State Department of Education, Hartford, Connecticut, has said: "I think that everyone in library work with young people should have an understanding of the reading problem and techniques employed for improvement of reading."

Cramer described a reading program that was suggested by a librarian and cooperatively planned by teachers and parents [4]. Each class in the elementary and the junior high school met regularly in the public library branch located in the junior high school. The librarian gave book talks and library lessons; she helped the children select interesting books at their various reading levels and guided them in their reading. The program was continued over the summer months. Following are some of the observed outcomes of this program over a period of fifteen years during which time, it is assumed, policies of promotion and marking were held constant: (1) repeaters decreased from 20 to 1 per cent, (2) all pupils were generally reading up to their capacity, (3) nonreaders disappeared from the upper grades, and (4) gifted children found more opportunity to read widely.

The librarian helps her clients of all ages to progress in their reading experiences. First-grade children may have library cards as soon as they can write their names. They should continue to explore books for pleasure during the elementary school years. In junior high school they should read eagerly and begin to do considerable reference work. In senior high school required reading and other interests tend to crowd out recreational reading. Junior "Greatbooks" clubs may be formed. Able learners who complete their regular work quickly may use the time for free reading in the library.

The librarian guides students' reading. Starting with whatever books or magazines they are now interested in, he is alert to suggest something better in the same field and, eventually, to extend their interests to other fields. This he does by attractive, well-planned displays and exhibits, by informal talks about books, and by personal recommendations. One town librarian brought to the school new books which he thought would be interesting to the pupils. He showed them pictures, read appealing inci-

dents, and related the books to the pupils' background and experience. The teachers were enthusiastic about this service, which encouraged many school children to use the public library. The librarian can introduce new books by assembly programs. One idea is to flash some exciting or amusing pages of an easy book on the screen, thus convincing the poorer readers that reading can be fun. Favorite-book polls, bulletin-board exhibits of book jackets, mimeographed or printed bibliographies on special subjects, and reading ladders listing books that range from easy to more difficult, from poor quality to literary excellence are other effective methods of providing the right book for the right child (see Chapter 18). He may encourage some youthful readers to write and publish a mimeographed book-review magazine. He will often arrange books of different literary quality according to specific subjects so that he can say to a student who has enjoyed a sea story of poor quality, "You'll find other exciting sea stories on the same shelf." Information on the reading-test scores of students who use the library helps the librarian to avoid discouraging a student by suggesting books that are too difficult for him.

The librarian supplements the teacher's instruction about the location of material. A quick way of orienting students to the library at the beginning of the year is to have them fill in a mimeographed chart of the reading room, indicating where different types of books are to be found—travel, aviation, biography, science, etc. The librarian will also acquaint them with the card catalogue and the use of the *Reader's Guide* and other indexes.

The librarian encourages projects that involve reading. One group of sixth-grade children who were not reading up to capacity discussed with the librarian in their first library period how they wanted to use library time. Someone suggested that they could help other students by becoming "specialists" in some field. Each child chose a field and built up a reference file on the subject. These files were to become a permanent part of the library and to be available for all who wanted to use them. When the school was asked to give a broadcast, this group was chosen to prepare it. They selected some of their specialists to report on books that they had read. The students were much pleased when they received many favorable comments on the broadcast.

The school librarian is a resource to teachers. He helps them to find references on the topics their students are studying in class, supplies books for classroom libraries, and furnishes lists of books for retarded readers. He suggests new books for students' recreational reading and makes them available in classrooms and residence halls.

Librarians can supplement reading with firsthand experiences and create conditions in which reading seems desirable and necessary. Activities of this kind include dramatizations and little theater groups, community sings, "nationality nights" with programs of folk songs and folk dances

of different countries, exhibits of local handicrafts and colonial household tools, exhibits of pictures from public and private sources, games, garden clubs, handicraft groups, the making of Christmas wreaths, hobby groups, stamp clubs, radio programs, and motion pictures.

School Doctor and Nurse. By conducting screening tests of hearing and vision and calling attention to other physical defects, the school doctor and nurse make a basic contribution to the reading program. In conferences with parents, they can both give and get valuable information about the child's reading and study habits.

The Guidance Worker's and Counselor's Contribution to the Improvement of Reading. Guidance and the improvement of reading are interrelated. The school principal and college president, recognizing this relationship, frequently ask the director of guidance, if no reading specialist is available, to assist in developing the over-all reading program. If the guidance worker has had preparation in methods of teaching reading, he can assume leadership and make helpful suggestions as to materials and methods.

Reading can be taught in the homeroom or in other group-guidance periods. It may be introduced in this way. The group-guidance teacher meets a new group. Since he believes in student-teacher planning, he asks them how they think they can use this one period a week to best advantage. Because of their previous experience with homerooms, or because they feel the pressure of high school reading assignments, or because they want to test the teacher's sincerity about this student-planning idea, or simply because they feel generally negativistic and resistant, with one accord they say, "Study."

Now if the teacher is sincere, he will accept their suggestion and help them to develop it. "All right," he says, "it certainly would be worthwhile now and in later life to learn how to read better and faster. What are your present dissatisfactions or difficulties with your reading? Let's get down to brass tacks and do something about them." From here on, the guidance teacher should know what reading skills the students need, how to demonstrate them, where to find practice material to develop them, and how to measure the students' progress so that they themselves can recognize it. The guidance worker in charge of such a group has the advantage of knowledge and skill in group work and in counseling. All he needs to make his period highly successful is a corresponding knowledge of the teaching of reading.

The homeroom teacher, or any teacher who is responsible for a small guidance unit, contributes to the reading program in several ways. He may detect and refer reading problems, help individual students by means of short conferences, make personal recommendations of books, and include a unit on reading and study methods in his group-guidance program.

Many guidance problems referred to deans and counselors originate in

or involve reading and study habits. Counseling problems may turn into reading problems. The counselor uncovers reading difficulties in orientation interviews and other talks with students—those who are failing in their subjects, who want to leave school, who have been refused admission to college because of low reading scores, who are blocked in their vocational plans by low reading ability. He meets reading difficulties in dealing with students who are referred because of behavior problems or who are socially or emotionally disturbed.

Reading problems often turn into counseling problems. Many serious reading cases involve emotional disturbance, and require psychotherapy as well as skillful instruction in reading. In some cases, no progress can be made in reading until some of the emotional conflicts are resolved.

The counselor in high school and college meets many seriously retarded readers who need the intensive study and treatment described in Chapter 13. Counselors, teachers, parents, students, and reading specialists form a team to promote better reading development and better personal adjustment. Since reading difficulties are so closely interwoven with the student's total adjustment, it is desirable that one person handle as many aspects of the case as possible, in order to achieve continuity of relationship and to avoid shifting the student from one worker to another. To do this, counselors and reading specialists should have some training in common —counselors should have some background and skill in handling reading problems, and reading specialists should obtain as much understanding as possible of the emotional factors related to reading.

The Role of the Parent. It is important for us to view the reading problem through parents' as well as through students' eyes. Parents expect the school to teach their children to read. In many localities parents think that reading is being poorly taught. They complain that their children cannot spell and that many of them have trouble reading. They often say, "The schools are not teaching reading as well as when I was a kid. Why don't they go back to the good old methods?" These accusations are not, in general, supported by facts. On the average, pupils' achievement in silent reading is as high as it was twenty-five years ago, or even higher [30a]. However, since reading holds such an important place in our culture, parents immediately become concerned when their child gives any indication of a reading difficulty. Generally they feel that something can be done about it. They believe the child can read better "if he puts his mind to it" or if he is given the right kind of instruction. Their appeals for help are often pathetic.

Some parents exaggerate their child's reading problem. In fact, they may prematurely label him a "reading case," and this label itself may intensify what was originally a minor difficulty. Sometimes parents attribute to the child a desire to improve which the child himself does not feel. One

mother wrote, "Jim is very anxious to start work at the Reading Center, as he knows he is losing time in school because he can't read or spell." Jim passively accepted his mother's verdict but inwardly resented it.

Other parents, unconsciously rejecting the child wholly or in part, may seize upon reading retardation as a point of attack. When the child is afraid and embarrassed in school because of his poor reading, these parents give him little or no sympathy. Worse still, they may give him the impression that they are thoroughly ashamed of him. They may make him stay in and study every evening, even though this accomplishes nothing.

On the other hand, there are parents who interfere with their children's reading and study time. These children complain that they have no uninterrupted time at home to read and study. They have to go on errands, do housework, take care of the younger children. In some crowded homes, there is always a hubbub; the children cannot even sleep at night. Then there is television.

When it is their own child who has a reading problem, parents tend to lose perspective. The reading difficulty looms disproportionately large. They apply pressure methods, without realizing that they may thus be increasing the child's resistance to reading or anxiety about it. If parents would examine their own feelings as well as try to understand how the child feels, they would solve their children's reading problems more successfully.

Many parents are eager to cooperate in the reading program. At home they can show their enthusiasm for reading; they can read books aloud and discuss them. They can take the children with them to the library. Whenever possible, they can provide a quiet place for reading, with proper lighting and good reading materials easily accessible. They should guard against overscheduling the child's day, thus leaving him no time for free reading. Recognizing adolescents' desire for independence, parents suggest rather than require that their children read certain books.

Some parents willingly cooperate with the school. They help to build up files of resource material and suggest persons in the community who can come to the school and enrich the children's experiences. Others raise money for needed supplies. Still others join cooperative planning groups to improve the reading program. They also help to develop community programs in art, music, drama, and sports that may enrich and stimulate the children's reading, as well as balance their daily schedule.

The Role of the Student. Too often the students are ignored in the development of a reading program. Yet they have sound ideas as to the methods and materials that help them most. They should be encouraged to participate by contributing their self-appraisals and making a continuous evaluation of the learning experiences they are having.

ESSENTIALS OF PROCEDURES

Any procedure for teaching reading is a tool that must be used skillfully and appropriately. What is effective under one set of conditions may fail in an apparently similar situation. For example, if a book is recommended by a parent, teacher, or librarian whom the student dislikes, he may reject it even though it would be a good book for him. A Chinese proverb states truly that "a poor method used by a good person may bring good results, while a good method used by a bad person may bring poor results." There is no one best method; the trend is toward using various combinations of methods. Whatever the pattern, it should be learner-centered. That means understanding the learner and using materials related to his experience.

In addition to the general conditions and administrative measures that are conducive to reading improvement, the following procedures may likewise be considered essential. First, provide experience to build vivid and meaningful associations with words and thus prevent verbalism, or word calling. For example, *calorie* becomes a functioning part of a student's reading vocabulary when he has seen pictures of a calorimeter in which a person's energy expenditure is measured; weighed 100-calorie portions of different foods; and calculated the number of calories he has eaten for lunch. After the student has had some interesting experience, his speaking vocabulary may be further developed through conversations about it. Students' accounts of exciting or amusing experiences, dictated and transcribed, are useful as beginning reading material.

Second, whenever possible, ally reading with purposes important to individual students, such as being able to carry on a more interesting conversation, to make or do something, to contribute information needed by the group. Having a purpose creates readiness to read and evokes the effort that reading demands.

Thirdly, we cannot overemphasize the importance of supplying reading material on each student's present level of interest and ability, providing for progression of experience, and giving the student concrete, objective evidence of progress. When students lack basic skills in word recognition and other aspects of reading, specific instruction is indicated. Finally, we must individualize instruction in various ways appropriate to the situation [19].

Every member of the school staff should realize that helping students read more efficiently is part of his professional job, not an extra task. If each focuses attention on essentials and makes his special contribution, the success of the school-wide reading program is assured.

The improvement of reading involves every aspect of the educational situation. The curriculum may prevent or create reading problems; it may

reinforce or defeat any remedial work done. The atmosphere of the school may be conducive or detrimental to improvement in reading. Guidance focuses attention on the individual student and his needs for reading; it assures a constructive, warm relationship in which learning can take place. And learning is facilitated by suitable materials of instruction and skill in teaching.

CONCLUDING STATEMENT

If emotional and reading problems stem from the same underlying conditions or constellation of factors [24], then the reading program should help students to develop some insight into their reading and study problems as intimately related to their personality functioning as a whole, and the pressures, demands, and contradictions of the world in which they live. Instead of assigning students to therapy groups for help with personality problems and to reading-skills courses for reading problems, we should try to provide the reading–group-therapy approach for students with obvious emotional difficulties and the reading–personal-development approach for others. Reading problems and emotional problems are not separate entities. Ideally, they should be simultaneously treated by a qualified person.

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CHAPTER **4**

Sequential Development of Reading

In reading or in any field of learning, a map of values is a helpful guide to teachers. It gives them perspective so that they can see an individual's present development in the light of his past experiences and his future goals and needs. It gives them a sense of the progression and continuity of reading experience. It suggests many concrete objectives; teachers and students may choose those which are most important for the group and for individuals at any particular time.

DEVELOPMENT OF READING

Goethe said: "The dear people do not know how long it takes to learn to read. I have been at it all my life and I cannot yet say I have reached the goal." Learning to read is a lifetime process. From birth to old age, each period of life makes its contribution to the development of reading abilities, interests, and attitudes. Reading ability is one aspect of the individual's total development; it increases with the scope of his interests, with the growth of his general ability, and with the challenge of increasingly complex and difficult reading tasks.

As skill in reading increases year by year, its many components appear and emerge in kaleidoscopic fashion. Reading development is not a series of separate steps. Reading skills do not appear fully blown at certain stages of readiness; they develop gradually and are continuously modified as the child moves through school. Some reading skills never reach perfection. One pattern of reading merges gradually into another as it affects, and is affected by, the individual's experience and language development.

Reading development takes time. There is a "magic of time in a good environment" [1, p. 100]. Our task is to provide the experiences the individual needs and guide him in the use of these experiences. He does his own learning as he gains self-confidence through a progression of suitable experiences.

To help the student progress, the teacher must discern when he is ready to move ahead. There are times when he needs to work on a certain skill a little longer—but not so long that it becomes a fixed habit that cannot be modified by new demands. We should guard against pressure methods that produce temporary gains but diminish self-reliance and blunt the desire to read. Premature imposition of advanced standards of reading efficiency may cause a slump; it may also result in emotional difficulties and problems of adjustment. We have often seen the unfortunate results of premature parental pressure—children who tried to read before they were able, failed, and were afraid to try again.

On the other hand, if a child is not held to standards of achievement that are appropriate for him or is deprived of reading experiences, he will not realize his potentialities. A refugee boy of fourteen who came to the reading center was reading only on the third-grade level. For three years during the war he had not attended school. For two more years he had attended a school without books. His growth in reading had been distorted by this educational deprivation. When he was given the necessary instruction and practice, starting at the third-grade level, he made very rapid progress and maintained his gains. The reading potentiality was there; it needed only suitable experiences for its development. Such retarded readers must have special instruction and practice to compensate for lack of earlier developmental experiences. Only thus can they be helped to resume their true developmental course of reading achievement. Every individual has certain reading potentialities which will develop if conditions are favorable. There is a happy medium between too much pressure and extreme *laissez faire.*

The child-development view of reading requires an understanding of the individual's development—how he got that way, what his present abilities and interests are, and where he is going. It requires that we use the resources within the individual and help him to grow in his own best way and at his own best rate. Children grow toward reading readiness at different rates. Four-year-old Marie Curie learned to read casually and quickly by watching her older sister struggle with beginning reading. A mentally retarded boy with an IQ of 52 gained nothing from class instruction in reading until, at the chronological age of fourteen, he had reached a mental age of six or seven years. Then, with individual help, he progressed until he reached his limit of growth.

STUDENTS' SELECTION OF THEIR OWN GOALS

Much emphasis has rightly been put on students' setting specific goals for themselves. This practice is sound. It guides the student's reading and gives him a basis for judging growth in attitudes, interests, and appreciations, as well as skills.

As they progress through school, students should take more and more initiative in choosing their reading goals. From the patterns we are about to describe, they may select any parts that seem important to them at a given time. They may assemble these components into their own pattern for improving their reading and study. The plan they make will serve as a basis for student-teacher conferences on their reading development and on their personal development through reading.

THE READING CURRICULUM

Although it is possible to describe an individual's progress in reading, it is much more difficult, if not impossible, to lay out a program for progressive reading achievement through the grades. There was a time when we thought that children in the first three grades were to learn to read; pupils in the middle grades were to read to learn, and to read more fluently and with more expression; and students in high school and college were to evaluate what they read. Now we are realizing that, although these general goals are emphasized in successive years, every important reading skill has its genesis in the early years. For example, the child in the first grade should begin to develop the simpler forms of the so-called higher reading abilities —appreciation, organization of thought, critical thinking, the drawing of inferences, and the application of ideas—within the range of his interests, experience, and capacity. From there on, the development of interests, appreciations, and personal growth takes place gradually with the challenge of increasingly complex and difficult reading tasks at each successive educational level.

Each stage of reading development builds on preceding stages; the basic elements are there from the beginning. When a child tells what happened first, next, and again next to the three bears in the famous story, what is he doing? He is standing on the bottom rung of the ladder of organization, taking the beginning step in outlining; he is becoming sensitive to simple sequence. Every child at every level of reading, regardless of his status relative to the other pupils, needs to have experiences with all the reading skills on a level appropriate to his development. Whatever is omitted in one grade becomes a millstone around his neck in another. And this fact has its importance for all those interested in the total development of the child; both the classroom teacher and the tutor can create reading problems by overemphasizing one set of skills to the exclusion of another.

Since there are such wide individual differences among children, and since the reading process is so complex, it is difficult to present a sequential picture of reading development from birth to adult life. Accordingly, the reading curriculum must be presented as a panoramic pattern rather than as a list of skills to be taught year by year.

From Birth to Two Years. The infant takes his first step on the road to reading when he distinguishes, out of the vague blur of light and darkness, his mother's face and other objects that have interest and meaning for him. He learns to look. When he learns to listen, speech begins. It develops as he endlessly repeats his first sounds, imitates others, learns single words, and, by the time he is two years old, acquires a vocabulary of a few hundred words.

Later Preschool Years. Before formal reading begins, many prereading experiences lead to the development of language and concept. Language becomes increasingly useful to the preschool child. His questioning reaches a peak.

During the early preschool years the child learns to "read" pictures. When he sees a picture of a dog and says, "Bow-wow," he has learned to associate a symbol with a previous experience. Firsthand experiences put meaning into words. When he identifies the same little boy on successive pages of his storybook, he is learning to distinguish forms that are alike from those that are different. Soon he begins to notice printed words in signs and labels about the house and on the street—"Hot" and "Cold" on the water faucets, "Bus Stop" on the street corners, words flashed repeatedly on the television screen. He notices the black and white marks on his picture books and on the newspaper his daddy is reading. Showing an interest in letters and numbers, pretending to read, asking the meaning of signs and labels—these are all signs of a growing readiness for reading.

If the child goes to nursery school, he may find his name printed above the hook on which he is to hang his coat and hat. When he becomes aware that printed words have meaning for him, he has taken an important step in learning to read. During these years the child is building an oral vocabulary. Spoken words acquire meaning from his firsthand experiences and his attempts to express his ideas. Parents and nursery school teachers facilitate this development by providing good speech patterns and encouraging good speech habits. They read and tell stories, talk with the children about their interests, encourage them to relate their experiences, to make up stories, and to give short plays. By the time he enters the first grade, the child who comes from a favorable home environment has acquired a useful oral vocabulary and has become familiar with the literature of early childhood.

Beginning Reading in the Primary Grades. The child who has already acquired many firsthand experiences is more likely to realize that a single word may represent many different varieties or forms of an object or ac-

tion. For example, a picture book showing different kinds of rabbits in various poses, with the word *rabbit* printed under each, would impress upon the child the idea that a word is not an object—it may have multiple meanings.

Some words may be learned as wholes. This requires the ability to distinguish likenesses and differences in words—two round letters in the middle of *moon,* the same tall letter at the beginning and end of *tent.* If the printed symbol is associated with a spoken word, whose meaning is known, or with a picture, an object, or an action, the printed word becomes meaningful.

New words may also be sounded out. Good listening comprehension is both a prerequisite and a prediction of growth in reading. To establish proper associations between sounds and printed letters, the child must be helped to identify the various sounds in spoken words and to differentiate between the various letters. Once this relationship between the visual symbol and the sound has been established, growth in vocabulary becomes rapid, and the child is "on his own" in reading.

If learning to read could be made more natural, more like the process by which a child learns to talk, fewer reading difficulties would appear later. Reading, like talking, should be an intrinsic part of the child's living. If the child feels a real need to associate the printed word with the sound of the spoken word or with an object or action, the effort to do so enlists his wholehearted attention and concentration. Moreover, the printed word is then learned with its meaningful associations.

Lack of incentive deters some children from gaining proficiency in reading during the early school years. Agnes Repplier did not learn to read until she was ten years old. Up to that time she had not seen "any connection between the casual and meaningless things called letters and all the sweetness and delight that lay between the covers of books" [20, p. 3]. Then came an edict, "wise, harsh, and menacing." Her mother gave strict orders that no one should read to her. The ten-year-old Agnes, after a few days of blank despair, sized up the situation and quickly, though not without effort, learned to read.

From the beginning, the child should read with an active, curious mind; he should seek meanings. Whenever possible, he should apply the ideas he has gained from reading. The skills involved in achieving accurate perception and a clear comprehension of meaning are basic to all further reading. As a result of his acquiring basic skills, reading should become for the child a thought-getting process, an enjoyable activity, a means of acquiring some understanding of himself and others, and a component part of his language-arts pattern, which also includes speaking, listening, and writing.

As children progress through school, the individual differences in reading usually become greater. In any given grade, some children will need

to learn skills and use materials that are appropriate to previous grades. Others, while requiring reading instruction on their grade level, may have the intelligence, vocabulary, and maturity to read more difficult material. Still others may have acquired some, but not all, of the essential reading skills for their grade work.

Consolidation of Reading Abilities in Intermediate Grades. With a sound foundation of beginning reading experiences, most children should make rapid progress in the fourth, fifth, and sixth grades. Many of the meaningful affairs of everyday school life require reading. The pupils review and use previously learned methods of analyzing words; they often recognize unfamiliar words by dividing them into syllables. The pupils should now become more expert in using the context to unlock word meanings, and more sensitive to word relationships.

During the intermediate grades, children should master sentence structure, become adept at recognizing different paragraph forms, and gain ability to outline longer units. These are also good years in which to teach work-study skills. This is the period when children begin to read widely for enjoyment. Voluntary reading usually reaches a peak around twelve or thirteen years of age. Children of this age should begin to build a variety of reading interests, to form the habit of evaluating the books and articles that they read, and to extend their experience through reading. By the time pupils reach junior high school, they should read each selection with a definite purpose. They should learn to adjust their rate and method of reading to their purpose and to the material, should read with an inquiring mind, and should pause occasionally to summarize and to see relationships.

Expansion of Reading in the Junior High School. When a student enters high school, he is usually confronted with new subjects and increased demands for wide reading. He not only has to comprehend assigned reading; he must also be able to locate a larger number of sources of information bearing on a given topic or problem. As in previous years the incentive to acquire these reading skills will arise out of activities that seem important and interesting, will be reinforced by a group spirit in which students help one another to learn.

A sketch of the sequential development of reading during the junior high school years is truly sketchy because it consists largely of reviewing and developing further the skills and attitudes that were initiated in earlier years: word recognition, analysis, and meaning; basic vocabulary study; understanding of phrase, sentence, and paragraph structure; organization and interpretation of ideas while reading; appreciation of literature; specific study skills; and an appropriate approach to different kinds of reading material. During these years special emphasis should be given to the development of the technical vocabulary and concepts of new subjects; greater expertness in word analysis, reference reading, and interpretation;

a higher quality of reading interests and tastes; greater flexibility in approach to different kinds of material; and more effective study habits.

During the junior high school years the child's world expands rapidly. Books make up for limitations in his physical environment, and he should learn to use them to extend his experiences and to gain understanding of his country, his times, and himself.

Some junior high school pupils are reading only on the second- or third-grade level; they need special instruction and materials in their regular classes. Any seriously retarded readers require special diagnosis and remedial work.

Gaining Independence in Reading in Senior High School. During senior high school, students may be guided in taking more responsibility for their own improvement in reading—to study, under guidance, the results of reading tests and exercises; to set specific goals for themselves; and to help plan their individual reading programs. This kind of initiative is highly desirable and represents growth in self-appraisal and self-direction.

The student's power to interpret meaning should continue to grow during the senior high school years. He should learn to read between the lines to determine the full and precise meaning of single sentences, paragraphs, and passages as a whole. This kind of interpretation requires understanding of the author's hidden intention, his tone, the setting in which he wrote, his attitude toward himself, his subject, the reader, and other people and things. Misinterpretations become less frequent as students analyze the mental processes that lead them either to errors or to successful interpretations.

Students should also become increasingly appreciative of the personal values of reading. Through reading they can extend their experiences and become acquainted with new places and people. They can gain insight into how people may feel when they behave in certain ways. Thus the students can increase their understanding of themselves in their complex and often trying family and boy-girl relationships. These personal values that may accrue from reading are not likely to be achieved, however, unless they are recognized and sought by both students and teacher.

The student who has this personal point of view toward reading thinks of each author as a person who has something to say to him. The experience of communication through reading should be almost as active and stimulating as conversation with a friend. The student who approaches reading with this expectant attitude shows a marked contrast to the many students who read aimlessly and unimaginatively because they have never learned that reading may have meaning in their lives—that literature and life are inseparable.

With respect to each objective of reading, three things should be considered: (1) whether the student's growth is adequate in relation to his ability, (2) the nature of the growth that he is experiencing, and (3) pos-

sible reasons for his progress or lack of progress, such as desire to learn, knowing how to learn, satisfaction in progress, and some effort to apply the knowledge and skill to life situations.

Creative Reading in College. During the college years, students should not only improve in the abilities mentioned up to this point but should also become increasingly aware of the different approaches needed in reading different kinds of material. Our language reflects our activities: our action is expressed in narration, our thinking in exposition, our feeling in lyricism. The student reads a book by Rachel Field, Thomas Mann, or Willa Cather differently from the way he reads a treatise on mathematics. Obviously, the college student who does not recognize the need for a different mind-set for different kinds of material, and even for shifts from narration to exposition to lyricism within a single work, will not read with the greatest efficiency. Without this adaptability to the diverse demands of reading material, students are not likely to select judiciously, read critically, interpret cogently, appreciate fully, or adapt their reading rate and method flexibly to different kinds of material and to different purposes in reading.

Intelligent reading in college is essential to the development of a scholarly person—one who has the ability to speak and write effectively. Such a person should be able to draw upon a mind stocked with significant ideas —a mind precise, not vacillating from one extreme to another, realistic, and richly human. College years—in fact, all the years of formal schooling —offer unparalleled opportunities for employing the present in such a way as to build a useful past—a past stored with meaningful experiences which can be used in meeting new situations. The mature reader has a social purpose in reading [11]. He plans and carries out an appropriate individual program of self-improvement in reading, not only for his personal development but also because of his conviction of the importance of reading in the world today.

Higher Levels of Graduate Study. For successful graduate study, the reading abilities described are a necessary foundation. Advanced students specializing in different fields will, however, show marked individuality in their reading methods (see pages 19–20). Like Santayana, the student may at some times browse through many books, and at other times be concerned with a much deeper comprehension of philosophical writing [23, pp. 187–188, 248]. Individual differences in students' reading and study methods should be respected.

For the highest levels of thoughtful, critical reading, mere verbal comprehension of the main ideas and supporting details is not enough; there must be judgment on the basis of knowledge, appraisal of the author's sources of information, and recognition of his intent and purpose.

Every person has reading potentialities that can and should be developed for his personal satisfaction and social usefulness. Some are capable of comprehending difficult and abstract material. Others cannot attain so

high a level of reading power but still are able to read widely in many fields within their range of comprehension. Some are better adapted to one speed of reading than to another. In brief, each person should be helped to discover and develop his reading potentiality—the particular level, breadth, and speed of which he is capable. At any age an individual's reading performance should be evaluated with reference to the reading potentialities toward which he is growing.

Sequential Development of Language Arts by Grade Levels. There have been a number of attempts to work out a specific sequence of reading skills by grades. For example, the laboratory schools of the University of Chicago [6] have worked out in admirable detail a chart showing a plan of reading development in the first six grades. The San Diego County schools published a course of study describing the nature of reading development and the reading program, and including a Chart of Expectancies in grades 1 through 8. The Detroit public schools have prepared a comprehensive *Guide to Instruction in the Language Arts, Grades 4, 5, and 6.* The New York City schools published a teachers' guide for curriculum development in reading in grades 7, 8, and 9.

Chart of Sequential Development by Grade Levels. The chart on pages 101–111 presents a picture of reading development and personal development through reading from preschool years through college. The O indicates informal incidental experience; the B, the grade in which instruction may be first introduced for pupils who have made normal progress. The X indicates continued practice and instruction, and the M represents an initial degree of mastery. Retarded readers in any grade will begin where they are and advance upward on the ladder of reading development as fast as they are able.

Many of the items in this outline of sequential development may seem too easy or too advanced for the level designated. It is a matter of degree of proficiency. All of these reading abilities can be developed to some extent, within the child's present range of ability and experience.

Children who do not make the expected progress need special instruction. When these children are neglected in their reading, difficulties accumulate. The success of remedial work depends a great deal on a favorable class atmosphere—an atmosphere in which children help one another to learn under the guidance of a friendly, understanding teacher.

CURRICULUM RESEARCH NEEDED

To build a reading curriculum, several research strands should be brought together. To the child-development approach should be added an understanding of adult needs for reading in this modern world of mass communication. Thus, fusing the past, present, and future, a map of values begins to emerge. But information about what children can learn at dif-

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
1. Experience background:							
Uses many kinds of experience to gain understanding of words.	O	B	X	X	X	X	X
2. Preparatory experiences:							
Learns to look, to see likenesses and differences in forms and words, to perceive words clearly.	O B	B X	X				
Learns to listen to and discriminate sounds.	O B	B X	X				
Builds a listening and speaking vocabulary.	O B	B	X	X	X	X	X
Learns the letters.	O B	M					
Looks at words and asks their meaning.	O B	B X	X				
Learns to listen and speak fluently in a group.	O	B X	X	X	M	M	M
Learns to tell a story to an audience.	O	B X	X	X	X	M	M
3. Beginning reading:							
Associates the sound of the word and its meaning with the printed symbol.	O	B X	X	M	M	M	M
Identifies sounds and combinations of sounds in words.	O	O B	X	M	M	M	M
Recognizes the same sound in different words.	O	O E	X	M			
Learns to read sentences from left to right.	O	B X	M X	M			
Builds a basic sight vocabulary.	O	B X	X	M			

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	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Uses newly learned words in conversation and in writing.	O	O O	O O	O O	O O	O O	O O
Uses his experiences to interpret what he reads.		O B	X	X	X	X	X
Grasps the meaning of simple passages.		B X	X	M			
Reads aloud with expression.		B X	X	X	M		
Reads directions.		B X	X	X	M		
Finds the answers to specific questions in reference books.			B X	X	X	X	X
Recounts in correct sequence the events in the plot of a story.		O	O B	X	X	X	X
4. Vocabulary development:							
Learns new words incidentally through wide reading.			X	X	X	X	X
Learns key words and concepts as he studies each school subject.			B X	X	X	X	X
Learns technical abbreviations, symbols, and formulas needed in each field.			B	X	X	X	X
Consults the dictionary or glossary for exact meanings of words.			B X	X	X	X	X
Studies words in context systematically.		B X	X	X	X	X	X
Makes a dictionary of new words, giving pronunciation, derivation, definition, illustrative sentences.		B X	X	X	X	X	X

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Becomes interested in word origins and the different meanings of the same word in different contexts.			B X	X	X	X	X
Recognizes the meaning of common words clearly and instantly.		B X	X	X	M		
5. Word recognition skills:							
Uses clues in the context to get the meaning of unfamiliar words, selecting the meaning that best fits the context.		B X	X	X	M		
Divides words into syllables so that he can pronounce them; knows and applies common principles of syllabication.			B X	X	M		
Uses phonetic approach if syllabic approach fails.			B X	X	M		
Knows and applies common phonetic principles; notes initial, middle, and final sounds and letter blends.		B	X	X	M		
Uses structural analysis of words whenever helpful, noting general configuration of words, identifying details and structural parts of words.		B X	X	X	M		
Learns more about how prefixes and suffixes modify meaning of the roots.				B X	M		

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Uses the dictionary as a check after he has attempted to get the meaning from context.			B X	X	X	X	X
Acquires a deeper understanding of the structure of language.					B X	X	X
Studies overtones of words and semantic derivation from original sense meaning.					B X	X	X
6. Understanding and organization:							
Reads in thought units.		B X	X	X	X	M	
Comprehends sentences accurately.		B X	X	X	M		
Gets main idea of a paragraph.		B	X	X	M		
Gets organizing idea of an article or chapter and relates details to it.				B X	X	M	
Writes in his own words a good outline or summary of the selection read.				B X	X	X	X
Gets author's pattern of thought as he reads.				B X	X	X	X
Remembers in organized form as much as is important for further thinking.				B X	X	X	X
Learns to read critically.		O	B X	X	X	X	X
Distinguishes the essential from the nonessential.				X	X	X	X
Examines truth or correctness of statements and detects discrepancies.		O	B X	X	X	X	X
Recognizes propaganda.				B X	X	X	X

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Recognizes differences between fact and opinion and among opinions of varying weight.			B X	X	X	X	X
Brings own experience to bear on the author's statement.		O B	X	X	X	X	X
Notes sequences of events or ideas and cause-and-effect relations.		O	B X	X	X	X	X
Predicts outcomes on the basis of clues given by the author.		O	B X	X	X	X	X
Draws accurate inferences and conclusions.		O	B X	X	X	X	X
Thinks as he reads, notes common elements and concepts, keeps them in mind, and relates them.					B X	X	X
Understands increasingly advanced and complex material.				B X	X	X	X
Connects ideas in new ways, reading between and beyond the lines.					B X	X	X
Recognizes attitudes in himself that might distort his comprehension.					B X	X	X
Pauses to reflect on serious material.					B X	X	X
Suspends judgment until all available evidence has been obtained.				O	B X	X	X
Integrates and organizes information gained from reading.			O	B X	X	X	X
7. Literary interpretation: Interprets characters' intent and behavior from author's clues.		O B	X	X	X	M	X

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Finds reasons for events and actions.		O B	X	X	X	M	
Recognizes persuasive words and is aware of their influence on the reader.			O	B X	X	X	X
Reads aloud well enough to give and get enjoyment.			B X	X	M	X	X
Participates in the aesthetic and emotional experiences presented by the author.		O	O	B X	X	X	X
Compares different styles of writing.				O	B X	X	X
8. Reading interests and appreciations:							
Laughs or smiles to himself as he reads a humorous book.		O	O	O	O	O	O
Voluntarily resumes reading a book he has chosen as soon as his other work is completed.		O	O	O	O	O	O
Uses school and public library for recreational and study reading.		B X	X	X	X	X	X
Reads many worthwhile books.		B X	X	X	X	X	X
Shows sensitivity to various levels of interpretations.			O	O	B X	X	X
Enjoys author's style in prose and poetry—picture-forming words, rhythm or cadence.		O	O	B X	X	X	X
Increases his awareness of and finds personal value in reading.		O	O	B X	X	X	X

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Appraises quality of book, magazine, television show, movie.		O	O	B X	X	X	X
Uses reading more in daily life outside of school.			B X	X	X	X	X
Reads as a favorite leisure-time activity which continues through life.			B X	X	X	X	X
Continues trend toward increased voluntary reading.			B X	B X	X	X	X
Improves the quality of his reading.			B X	X	X	X	X
Widens the scope of his reading.			B X	X	X	X	X
Develops one or more intensive reading interests.					B X	X	X
Enjoys discussion of books.		B X	X	M			
Shows decreased interest in reading the comics.			B X	M			
Resists forces such as television and auto riding that usurp reading time.			B X	X	M		
Finds more motivation to read.				B X	X	X	X
Uses television and other media of communication as part of a well-balanced program, recognizing the unique value of each medium and its special value in helping him to build an oral vocabulary and to supply an experience background for reading.			B X	X	X	X	X

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Reads to learn more about worthwhile hobbies.			B X	X	X	X	X
9. Work-study skills:							
Sits still long enough to attend to reading.	O	O B	X	M			
Skims skillfully for different purposes:							
to find a certain fact;							
to get a general impression;							
to get the main ideas;							
to find out what questions the passage will answer;							
to get clues to organization or plot.			B X	X	X	X	X
Learns to read maps, graphs, charts, diagrams, formulas.			O	B X	X	X	X
Learns to read out-of-school material—road maps, menus, signs, timetables.	O	O B	X	M			
Learns to locate and select pertinent information on a topic and to use it in a report.			B	X	X	X	X
Becomes familiar with a wider variety of sources.			B	B X	X	X	X
Learns to take notes.				X	M		
Acquires skill in the Survey Q3R method and uses it whenever appropriate.			O	B X	X	X	X
Reads more rapidly with adequate comprehension.				B X	X	X	X

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Develops speed and fluency by reading easy material in each subject.			B X	X	X	X	X
Applies ideas gained from reading, as, for example, in making pictorial, graphic, and tabular records.			B X	X	X	X	X
Uses ideas gained from reading to solve problems, prove a point, develop an interest, or entertain someone.		O	B X	X	X	X	X
Forms good study habits, budgets best time of day for study and creation.			B X	X	M		
Creates the best conditions possible for efficient study.			B X	X	M		
Gets to work promptly.		O B	X	M			
Applies psychological principles to remembering what is important.				B X	X	M	
Uses his own judgment when it has a sound basis.					B X	X	X
10. Approaches to outcomes of reading:							
Sets specific objectives before beginning to read.		O	B X	X	M		
Varies approach, rate, and reading methods according to the nature of the material—different kinds of writing and different fields; thus gains fluency and efficiency through adaptability and flexibility and purposeful reading.			O	B X	X	M	X

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Reads with the intent to organize, remember, and use ideas.			O	B X	X	M	
Reads to solve problems, answer questions, understand developments and events outside his immediate environment [9].		O	B X	X	X	M	
Relates reading to his own life; shares ideas gained in reading.		O	B X	X	X	X	X
Gains understanding of himself and others through reading,		O	B X	X	X	M	
Concentrates better.		O	B X	X	M		
Experiences a growing pleasure in precision—shows unwillingness to half understand a passage.		O	B X	X	M		
11. Personal development through reading:							
Selects reading material that meets a personal need or widens his experience.		O	B X	X	X	X	X
Reads to solve personal problems; relates ideas gained from reading to his personal living—to each of the developmental tasks appropriate to his age.		O	B X	X	X	M	
Uses information from his reading in group projects, dramatizations, class discussions, committee work, club activities.		O	B X	X	M		

	Preschool and kindergarten	Primary grades	Intermediate grades	Junior high school	Senior high school	College	Adults
Gains understanding of himself and others from reading autobiographies, biographies, and true-to-life fiction.		O	BX	X	M	X	X
Gains understanding of the world of nature and the world of men.		O	BX	X	X	X	X
Behaves differently as a result of reading, as, for example, toward parents after reading *The Yearling,* toward Negroes after reading *Amos Fortune,* toward driving a car after reading *Hot Rod.*			BX	X	X	X	X
Uses reading in building a philosophy of life and sound convictions.		O	O	BX	X	X	X
Improves emotional conditions— worry, anger, fear, insecurity— that block effective study and reading by learning to accept his feelings and to channel them into safe pathways; gets help through counseling or psychotherapy, if necessary.		O	O	BX	X	X	X

ferent ages and how children of different abilities learn different skills is also needed. The students should have an important part in curriculum making. When the understanding gained from all these sources is synthesized, we shall have a really functional reading curriculum.

Through the reading curriculum the pupil acquires the most important single tool of learning. But this is not all. Many qualities of mind, character, and personality are developed through reading experiences. The need to solve real-life problems stimulates and motivates effective reading.

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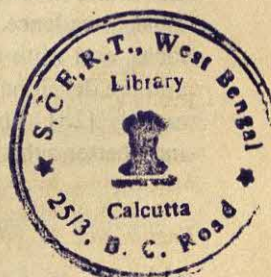
**PART II
READING IN
THE CONTENT FIELDS**

CHAPTER **5**

Improvement of Reading
in English Classes

How can goals, content, materials, and methods allow for the facts of reading growth?

A principal once said, "Yes, we teach them how to read, and look what they read!" He opened a drawer in his desk displaying the magazines of doubtful quality which he had taken from students in the school. The point he was making was a good one. Mere literacy is scarcely enough.

In their study of maturity in reading, Gray and Rogers found that the embarrassingly few readers in the adult population whose reading might be termed mature showed catholicity of interests, read in depth along one or two lines of special interest, and appeared to have developed a keen sense of social responsibility [10]. Dora V. Smith, chairman of the Commission on the English Curriculum of the National Council of Teachers of English, lists the following purposes of teaching literature: the enrichment of personal living, the development of insights into man's experiences and ideals in all times and places, literary appreciation (beauty of imagery, musical cadence, reader identification, imaginative perception, selection of ideas, and truth to human experience), the habit of reading independently, and the development of skills to interpret the author's meaning, moods, and artistry [28]. The problem of the present chapter is to suggest how we may better achieve these purposes in English classes.

CONTENT

In our society there are certain topics which we can be pretty sure are of great significance to young people without our even asking about individual preferences. They are the developmental tasks which Havighurst described in his book *Human Development and Education* [12], tasks which are likely to trouble everyone in the process of growing up. He listed under each task a number of books which might help students to understand their problems better [12, pp. 162–167]. The Curriculum Commission of the National Council of Teachers of English includes consideration of these tasks in curriculum construction in English in its broad program of desired outcomes of the teaching of English [5, pp. 62–66].

In determining the content of English courses, the students themselves must also be consulted and engage in active exploration of their own needs and interests. There are various ways of finding out about their experiences, preferences, jobs outside school, their opinions and preoccupations, the books they have liked in the past, books they remember with affection, more recently read books which they have enjoyed, kinds of books they would like to read next (see Chapter 14 on appraisal procedures). The content of the English course depends partly upon where the student is in personal development and realized needs.

Another way of judging what an English course should contain is to consider the areas of experience upon which the teacher can draw: classroom activities, school-wide activities, out-of-school activities of students, community issues and activities, and problems of the larger world community [6]. In thinking of content as a kind of radiation from the classroom on out into the world, we do not find ourselves neglecting the immediate concerns of students or confining ourselves to the literature of one cultural group.

READING ABILITY OF STUDENTS

Chapter 15 in the present volume deals with tests to determine the reading ability of students in a class. If we are to use standardized tests to find the reading levels of our students, we should use tests which contain the type of material which we expect to use in our English classes. A test based entirely on science and social studies material would not be applicable. Tests such as the Cooperative English Test [4] or Sequential Tests of Educational Progress: Reading [24] are perhaps constructed of materials more appropriate to our need. In any case, *we should look inside the test* to see what items the student has answered successfully and then compare the difficulty of the hardest item successfully answered with the difficulty of the materials we have in our courses. We can do this if we compare the frequency of rare or abstract words, the length and complexity of

sentence structure, and the complexity of thought (see Chapter 16). A whole bevy of reading tests especially good for English teachers is listed in *The English Language Arts* [5, pp. 474–475]. See also the *Fifth Mental Measurements Yearbook* [2].

Another way of finding out which of our materials the students can read is to make up a test based upon typical paragraphs from these materials. We arrange our materials in order of difficulty and select a passage from a book from each level of difficulty which we have identified. We ask questions on each passage, questions probing for the kinds of thinking we would expect students to do on that particular piece of material. If this is a long test, we give it in installments over a period of days; but even a half-period test gives some pretty valid evidence—valid because it is made up of materials we actually use and questions we actually ask in our class work. Of course, this is no substitute for a standardized test, but for this special situation it has its advantages.

The amount of detailed diagnosis an English teacher does depends upon the responsibility he assumes for the development of basic reading skills. Some information about vocabulary, comprehension, speed, word analysis, and study skills the English teacher can gather easily. He continually learns more about each student as the course progresses and modifies his plans accordingly.

MATERIALS

If the students are to learn to read, understand, and enjoy various kinds of literature, then we must offer that variety to them. Courses in the past have been criticized for the fact that they contained so little reading of newspapers and magazines, since the greatest part of most people's reading in adult life occurs in these media. Factual- and narrative-type material should be treated in an English course so that students become familiar with both types of reading matter.

Types of Literature. Various literary types—the poem, the short story, the novel, the essay, the play—have their own peculiar natures which, from the standpoint of reading skill, require adjustments of reading technique.

The novel and the short story vary in several ways that affect the reader's purpose and ease in reading. Given a simple plot, a story in which this plot is emphasized is easy to follow. If the author confines most of the plot movement to the actions of his characters, the skillful reader who is interested primarily in plot will find himself watching for these passages of action. If the author also uses conversation describing actions or conversation in which characters decide upon actions to advance the plot, the reader will concern himself with this. If a description of a place promotes the plot by setting the stage for coming action

and assisting the reader to predict coming events, this then becomes the object of careful reading. The reader not only is active in watching for developments in the plot but is constantly making predictions based upon the development of the story as he has experienced it. These conclusions as to what the next step will probably be are achieved by an analysis of the situation plus a comparison with life as the reader knows it. A specialist in story structure is likely to make another mental calculation: the artistic necessity of a given event's coming next.

When the story is largely concerned with character development or psychological changes, the plot may be relatively unimportant or almost nonexistent. The author may create this character development through his own discussion of the psychological changes involved, through the comments of other characters about the person who is changing, or through the conversation, behavior, or inner thoughts of the character himself. The well-oriented reader is aware of all these possibilities as he starts to read such a book, but quickly acquaints himself with the author's particular vehicles for the promotion of his special interest and notes these as he reads.

Some stories, particularly in recent times, have been written chiefly for the purpose of orienting the reader to the physical world. The author is a geographer or a scientist in novelist's clothing, so to speak. In such books the story is there to create interest and to keep the reader interested all through the passages of description. But skillful young readers who have learned to avoid descriptive passages deftly skip over these for passages with action or conversation. Thus, they read the book quite rapidly and emerge unscathed by the environment. One effective way of realizing the author's purpose in such a book is to have the students read it to get information to be used in painting a mural depicting the country and its life. With this purpose in mind the readers find descriptive passages becoming meaningful; the adjectives then are seen to be more than obstacles in the path of the names of things.

People who say that they read stories very rapidly are usually admitting to a selective type of reading. They read for plot, hurry to the romantic passages, or find the corpse in the first chapter and skip to the end to see "who done it." If the reader has a purpose in mind as he reads and learns to watch for the kinds of material useful to him, he is bound to achieve his purpose in shorter order than can the reader whose journey is aimless and undiscriminating. Rapid readers of novels are likely to be either of two kinds—people who have a limited appreciation of literature and read all books with the single purpose of seeking plot or love interest, or those sufficiently oriented to appreciate the particular emphasis that the author is making and to read especially for this.

It is perfectly true, however, that the quality of some literature is of such high order—the careful development of characters, the philosophy

of the author, the vivid reflection of environment, the wealth of meaning in every sentence—that an adequate reading is necessarily slow. This statement is not intended to imply that a person may never legitimately read a great book in any other way. No one, to our knowledge, has condemned the authors of reference Bibles; yet surely in preparing their publications they combed the Bible for topics only, not for the implications, the interpretations, the character delineation, or the expression of philosophy for which the Bible is desirably and commonly read. The point to be made is only that *certain works deserve a more considerate pace than habitual readers of lighter fiction are inclined to apply.*

While poetry usually demands slow, intensive, or concentrated reading, it does vary in this respect. Some poetry appeals to the intellect, some to the emotions, some to the subconscious. By tradition, poetry is allowed to do a number of things to create difficulty for the reader. The capitalization of the first letter of the first word in every line is disconcerting. For the sake of a rhyme a sentence is often turned about in an unnatural manner, causing the reader to shuffle the parts of the sentence mentally until the relationships become clear. "To pass there was such scanty room/ The gate descending grazed his plume," is scarcely the way one would tell the incident to a companion, even in poetic prose.

Frequently, too, the sentences are long and full of modifying phrases conveniently placed to throw the reader into confusion. The school of thought which holds that poetry should be couched in rare and elegant language has caused the reader further mystification. The use of analogy, of words chosen partly for their sound, and of figures of speech requiring interpretation of the meaning through symbolism has been another distraction and reason for slow reading. Ballads and other poetry using dialect have been an additional hurdle. And the concentration of thought in a shorter space than is typical of prose—a feature common to most of the older poetry and some modern poetry—causes the reader to travel slowly to make certain of relationships and main intent.

Modern poetry whose metric pattern has become a flowing cadence rather than a predetermined form with an unchanging number and kind of feet in every line may present less of a problem. While the thought may still be so concentrated as to require careful reading, the cadence permits a continuity that reduces sentence distortion.

Narrative poetry is more easily read than most other kinds of poetry unless, of course, it presents special problems of dialect or some other incidental hazard. The form itself gives the reader the advantage of a thread of story to hang on to. There is no problem, as in the sonnet, of discovering through the symbolism what the author has in mind. In "The Wreck of the Hesperus," to speak of a much overworked disaster, the title itself and the opening lines leave the reader in no doubt about there having been a wreck. On the other hand, in the sonnet beginning "Euclid alone has looked on Beauty bare," the reader's imagination is free to roam.

As with the novel, the purposes for which people read poetry vary partly according to literary taste. Edgar Guest is read for his homely sentiments; Vachel Lindsay is famous for his rhythms; Robert Service for his characters and humor; Carl Sandburg for his vigorous and unsparing forthrightness. It is usually the specialist who reads with an eye to technical perfection, a consciousness of figures of speech, and the appropriateness of rhythm, sound, and length of line to the subject. But possibly the most common reason for turning to poetry is to experience encouragement or inspiration or kindred feeling through the author's response to something the reader, too, has experienced but has been unable to express so well. The reader is likely to study the poem with care, mentally comparing the author's situation with his own and paying particular attention to the attitude with which the author has faced the situation. When in a school situation a reader's need does not coincide with the assignment of a poem, lack of a personal purpose for reading the poem compounds whatever difficulty exists in the material itself.

Articles or materials of a topical nature usually begin with an introductory portion setting forth the purpose of the discussion to follow. Ordinarily, in the last paragraph or so the argument is summarized or prediction is made of the dire consequences if the author's advice is not followed. But the middle portion may follow any one of a number of forms which the reader, to be efficient, must be ready to sense. Perhaps the whole will be devoted to an explanation of the author's stand; or perhaps opposing ideas will be presented and made ridiculous to assure a favorable reception of the author's proposal. According to tradition, in well-written material the first sentences of many of the paragraphs will suggest to the reader the plan of presentation that the author is following. A hurried reader may read only the first paragraph, to find out the author's purpose, and the last, to discover his conclusion. If such a reader is curious to learn, besides, the reasons that the author has for his view or the details that compose or support this view, he may read certain portions of the body of the article as well. Anyone who wishes a record of the steps in the author's logic may take notes outlining the main features. Another person, wishing to find the fallacy in the author's view, will read for the main steps of logic, constantly measuring them against his personal yardstick with such questions as: "Does this step follow logically?" or "Are there numerous exceptions to this?" until he finds the point of error, the leap in logic, the sly tangent, the flimsy analogy.

Reading two articles on the same subject may dispose the reader to make a comparison. This comparison may concern form if the reader is interested in composition, mode of argument if he is concerned with forensics, or content if he wishes to note which points are selected for the reaching of different conclusions.

Recognition of Student Interests, Needs, Tastes. Materials should be selected not only for the type of literature they represent but for the kind of

contribution they make to the student's thinking. What kind of picture do they give of the world? To how many different philosophies and points of view are we exposing these inheritors of the past? What assistance do the materials offer to the student in the solution of his immediate problems? Are they extending his present interests? Are they leading him to new interests? Is he being exposed to enough different styles so that he is gradually becoming conscious of some of the elements that create good literature?

Two recent studies have a great deal to say to English teachers. The Bernstein study [1] showed that intrinsically interesting material is read with greater speed and greater understanding, and that the interested reader has more to say about what he has read. The Schubert study [23] suggested that we were failing even with our more successful readers to develop awareness of literary values. Apparently the usual "osmosis approach" to style is not effective with most students. Probably the attack must be more direct, with attention drawn to the elements of style, examples sought and shown, and contrasts used to show effective and ineffective writing [17].

In the matter of reading taste it should be said that the idea of reading ladders has not always been associated with the student's disturbing ideas about himself and his associates, with problems of understanding one's elders and respecting differences among people. At one time a reading ladder meant a list of books on a given topic, going from a poor literary level up to the dizzy heights of the top rung with a great author. Dora V. Smith of the University of Minnesota has for many years been urging this kind of thinking about books, for teachers have so often made the mistake of expecting a student to go from the bottom to the top rung in one suicidal leap. "Oh, you enjoy ghost stories? Read *Hamlet*." It takes a while for a boy who has been enjoying the Tom Swift or Dick Tracy series to meet with equal zest the adventure appeal of Stevenson's *Treasure Island*. He needs to have the in-between experiences with increasingly better books and gradually to savor, not skip or merely tolerate, the elements of great writing that offer more than plot. Reproduced below is one of Smith's reading ladders [27] to illustrate the idea:

JUNIOR HIGH SCHOOL LADDER—SPRING, 1954

STEP IV

Moby Dick—Melville	*Captains Courageous*—Kipling
Ivanhoe—Scott	*Mutiny on the Bounty*—
Treasure Island—Stevenson	Nordoff and Hall
Huckleberry Finn—Clemens	*The Gold Bug*—Poe
The Three Musketeers—Dumas	*Red Heifer*—Davison
Prester John—Buchan	*The Yearling*—Rawlings
David Copperfield—Dickens	*Jim Davis*—Masefield
Last of the Mohicans—Cooper	*My Friend Flicka*—O'Hara
A Boy on Horseback—Steffens	*The White Stag*—Seredy

STEP IV (*continued*)

The Prince and the Pauper—Clemens
Windows for the Crown Prince—
Vining
Swiftwater—Annixter
North Winds Blow Free—Howard
Chucklebait—Scoggin
Lure of Danger—Scoggin

Starbuck Valley Winter—Haig-Brown
Hie to the Hunters!—Stuart
North Star Shining—Swift
*This Singing World for Younger
Children*—Untermeyer
I Hear America Singing—Barnes
All American—Tunis

STEP III

Of Courage Undaunted—Daugherty
Two Logs Crossing—Edmonds
Farm Boy—Gorsline
Big Doc's Girl—Medearis
Mountain Laurel—Emery
Tree of Freedom—Caudill
Smoky—James
Call It Courage—Sperry
Nuvat the Brave—Doone
Mutineers—Hawes
Swift Rivers—Meigs
No Other White Man—Davis
Railroad to Freedom—Swift
Navy Diver—Felsen
Going on Sixteen—Cavanna
Escape on Skis—Stapp
Caddie Woodlawn—Brink

The Chestry Oak—Seredy
Junior Poetry Cure—Schauffler
Twenty-one Balloons—DuBois
Young Fu of the Upper Yangtze—
Lewis
Blue Willow—Gates
The Good Master—Seredy
Little Women—Alcott
Canthook Country—Ames
Dive Bomber—Winston
Adam of the Road—Gray
Hari the Jungle Lad—Mukerji
Pecos Bill—Bowman
Miss Pickerell Goes to Mars—
MacGregor
Lassie Come Home—Knight

STEP II

Red Horse Hill—Meader
Sachim Bird—Robinson
The Boy Knight of Rheims—
Lownsberry
Lad with the Whistle—Brink
Big Red—Kjelgaard
Misty of Chincoteague—Henry
Paul Revere and His Horse—Lawson
Hans Brinker—Dodge
Young Mac of Fort Vancouver—
Carr
Ballet Shoes—Streatfield
Spunky—Hader
The Wonderful Year—Adams
Phantom Backfield—Brier
All Over Town—Brink

Dusty Star—Baker
Merrylips—Dix
Toby Tyler—Kaler
The Base Stealer—Bonner
Story of Doctor Dolittle—Lofting
Story-telling Ballads—Olcott
Stars to Steer By—Untermeyer
Willie Wong, American—Oakes
Tim's Place—Evans
Paddle-to-the-sea—Holling
Door-in-the-wall—DeAngeli
Sleighbells for Windy Foot—Frost
Blind Colt—Rounds
T-model Tommy—Meader
Cowboy Boots—Harst

STEP I

The juvenile series, such as *Nancy Drew*, the *Bobbsey Twins, Beverly Gray, Bomba
the Jungle Lad*, the *Hardy Boys, Ted Dixon*, and the like.

Excellent bibliographies which recognize the usual interests of young people are *Your Reading* (grades 7–9) [21], *Books for You* (grades 9–12) [19], and *Good Reading* (college level) [20]. *By Way of Introduction, A Book List for Young People* [13] is another. *The English Language Arts* lists many such bibliographies [5, pp. 469–470]. A teacher who is bewildered by all of these aids can sometimes meet her needs much more directly and satisfactorily by conferring with a good young people's librarian. The exchange can be gratifying on both sides if a steak dinner is included.

When we want students to meet a particular author and a particular work, and feel strongly that a simplified version of the book will not suit our purposes, we should read it aloud or have the better readers read it and report, and we should admit that this is not *reading* experience for the majority of our students. Let us provide auditory experiences when that is the only way the ideas can penetrate, but let us not count that as reading experience, and let us not think that a diet of such experience alone will result in increased reading skill.

Sometimes we can take the sharp edge off a difficult piece of literature by having students see the movie or the play before reading it. In this way they are assisted in their reading by familiarity with the story and a recollection of the scenes and characters. But let us be reminded that a diet of such reading, excellent as it is for some of the more able readers, trains the poorer readers in the bad habit of skipping words and whole passages which they cannot recognize or comprehend. We should not subject them to this experience. For them, the seeing of the movie or play and the discussion of the scenario by the more able readers are a better assurance that the beauty and wisdom will be caught. They will leave school knowing the name of the playwright, knowing the play, and imbued with some of its ideas. Best of all, they will not have learned to hate literature.

ORGANIZATION OF ACTIVITIES

This section of the chapter on the improvement of reading in English classes suggests some of the ways in which we can organize activities so that our various purposes for individuals, for groups, and for the entire class can be achieved. Some ideas along this line should have been gained in the reading of Chapter 2.

Classes are never truly homogeneous. Forty pupils are not as much alike as forty Chevrolets. General Motors tries to make them all alike; nature tries to make them all different.

Tenth-grade retarded readers in a class in a certain high school were all given the same thing to read, the same thing to do. The book they were using was a tenth-grade book. If they were below the level, why should they be using a book *on* the level? But even worse was the assumption that all of these students needed the same treatment. Some were fifth grade in

reading level, some seventh, on up to ninth. Doubtless some were inaccurate readers, while others were slow readers; some needed more vocabulary, while others needed to learn to think as they read. But the teacher and the administrator were not paying any attention to that, beyond segregating them from other students. It was a perfect formula for letting the reading skills rust while the school took credit for meeting individual differences.

Whole-class Activities. Some of our activities will be whole-class activities, everyone listening or taking part. In recognition of student interests, hobby shows can be spaced throughout the term. A student can present his hobby, books, or periodical sources of information about his hobby, and perhaps a film or pictures concerning it. Students who have read about the hobby can tell of their information. The teacher will recommend books which may take the student further on his way and start others in this interest.

Committees of students who have a common interest can make a group presentation—a panel discussion, a board-of-experts quiz program, a dramatization, oral reading of selections, or what not. They may have a display (model airplane, etc.) or a scrapbook of ideas they have obtained from their reading. A display of the books they have read will disappear, we hope, before the day is over.

Students may, as a whole class, become interested in rounding out their reading diets with books on subjects which they have never explored. *Using My Reading Design* (Form C for Grades 7–9, Form D for Grades 11–12) [25] is an artificial way of encouraging this impulse. It is a pie chart of the different kinds of interests students of the grade levels concerned usually manifest. Each student keeps a record on his individual chart of his current reading, trying to equalize a little more the amounts of reading in the various fields.

A similar device of a geographical nature is a map of the world, which becomes a class record of the countries about which individuals of the class have read. Such devices can be the basis for class discussions of books read and class requests for additions to their classroom library or class plans for the next library visit.

Once a week a book-club meeting can be held. This does not necessarily confine itself to one class. Two classes can meet together, if they can solve their seating problem, for mutual sharing of books they like from their recreational reading. A different student chairman can run each meeting, calling on participants who have expressed in advance their willingness to report that day. The types of reporting will vary with the individuals and become quite a competition of originality if some class discussion is devoted to the possibilities. A card file can be developed containing an interest-organized series of book recommendations by students who have enjoyed the books. A student using this file can locate a book to his taste, consider the source of recommendation ("He always reads harder books

than I can." "He always finds the best stories."), and make his selection. He can add his comment to the card if he disagrees or feels that not enough descriptive material has been offered to help a student choose.

There can be whole-class times when student groups who have made posters advertising their favorite books present them with comments to the class. Different students in charge of bulletin-board displays each week can discuss their jobs with the class and explain their findings.

On certain days the whole class may visit the library for book selection or work on special topics. On other days the librarian will bring books to the class to introduce some titles the students have not discovered for themselves. Research shows that some students never find or never bother to find books on topics they would really like to read about. Therefore, guidance is necessary.

Sometimes, too, a whole class will need brushing up on a certain skill. The teacher chooses a level that will be meaningful to everyone and makes a presentation. Or, if she is lucky, she may have material on different levels of difficulty to fulfill this purpose. The *Diagnostic Reading Workbooks* [8] are exercise books written on different levels of difficulty but exercising the same types of skill: vocabulary building, word analysis, reading facts and main ideas, and interpreting. The teacher can put into the hands of each student a book that fits his level. She can develop before the whole class a simple skill and then have each student practice it in the book which he has. (Other such material is available from other publishers, as listed elsewhere in this book. See Appendix C.)

For instance, suppose the teacher wishes to develop skill in identifying a main idea in a paragraph. He reminds the class of the football game last Friday. What did they think of it?

"It was great."

He writes on the chalkboard, "The football game Friday was great." Then he asks, "Why do you say that?"

"Well, every fellow was in there punching." "It was pretty evenly matched." "Then there was that wild run down the field that nobody could stop, no matter how good he was."

He writes all of these comments or has a student scribe do it.

Then he says, "We have just written a paragraph. What is its main idea, its main point?"

"The football game Friday was great."

"Why do you think that is the main point?"

"Because everything else we said supports it." "Because no other idea completely covers the topic. The run, the effort, the even matching are all parts of the idea but not the whole. The whole idea is that the game was great."

The teacher writes "main idea" opposite the first sentence and underlines the sentence.

"What title could we give our paragraph?"

"A Great Game." "Friday's Game." "A Great Run."

The teacher takes each one of these ideas down on the chalkboard; then he says, "Which of these titles is the best? Which gives the main idea best?"

The class agrees after discussion that "A Great Game" gives the idea, whereas "Friday's Game" might have been good or bad, and "A Great Run" was only one thing that made the game great.

Their own observations on paragraph structure may then be reinforced by showing the Coronet instructional film, *How to Build Better Paragraphs*.[1] After this the teacher may project upon a screen a simple paragraph on another topic easy enough for the poorest reader to read. He did not have to worry about the reading difficulty of the dictated football paragraph because the students offered their own ideas in their own words and knew what it said as they watched it being written. While some of them could not have identified some of the written words, they could "play by ear" well enough to discuss the ideas of it. The paragraph on another topic can be used to test their ability to identify a main idea and to defend its selection with reasoning about the relative contributions of the different sentences. Then he can have them turn for practice to materials at their own individual reading levels.

Subgroup Activities. There are also times when the teacher's purposes are served best by group activity. (See section on "Grouping" in Chapter 9.) Suppose, for instance, that the teacher and class are dealing with a topic and that the teacher has three books that are suitable for the class. One book can be read by even the poorest reader in the class, one by the average reader, and one by the best reader. All of the books have literary merit and all have something unique in style or depth of meaning. If the teacher simply has each child read a book congenial to his level, without group discussion and without teacher guidance, some of the values will be lost. The teacher has the individuals read in the class but provides time for group meetings in which students pool their impressions and face up to some of the values which they missed. The system may go something like this:

Tuesday	Group 1 meets with teacher. Group 1 reads silently.	Group 2 reads silently. Group 2 plans report to class.	Group 3 reads silently. Group 3 meets with teacher.
Wednesday	Group 1 plans report to class. Group 1 plans report to class.	Group 2 meets with teacher. Group 2 plans report to class,	Group 3 plans report to class. Group 3 plans report to class,

and teacher visits each group to keep machinery oiled.

[1] Coronet Building, Chicago, Ill.

	The sharing of book experiences by three groups takes place. Listening is purposed so that audience is listening for certain types of evidence. At end of all presentations there is a discussion of the general findings from all three books, including points of style as well as fact. This may take more than one day.
Thursday	

These are some of the ways we can meet common needs and individual differences in our English classes. Obviously, there will be many times when individuals will be working alone and the teacher will go around to help different ones. If we can keep from getting into a rut organizationally, we can do much toward keeping the reading program alive and well.

TECHNIQUES FOR IMPROVING READING

Books have been written on techniques for improving reading. This chapter can suggest only a few of the many techniques that are serviceable to the English teacher.

Vocabulary. Some suggestions for vocabulary development are to be found elsewhere in this book. In addition to noting and learning the meaning of the strange words that the author repeatedly uses and are essential to getting the meaning of the passage, students should pay special attention to dialect, figurative speech, literary allusions, abbreviations, and abstract words. They should be aware of the power of words which arouse one emotionally. At the same time, as readers of fiction, they should appreciate the power of such words to build the emotional character of a scene.

Word Study through Context Clues [17]. *Learning to Use Context Clues.* Frequently a student responsible for a report or the presentation of some printed material reveals his lack of knowledge of the meaning of a word in the text. The teacher's first honest reaction is probably one of vexation: "Here," he says to himself, "this student *knew* he was going to have to read this and explain it. If he didn't know the word, why didn't he look it up? If I've told the class once, I've told it a hundred times . . . !" But the first reaction isn't the best educationally. Instead, the teacher may use the following procedure to teach students how to learn to use context clues:

Suppose tomorrow you each bring in a sentence from a newspaper, a magazine, or a book—a sentence that contains a word you didn't know. Write the sentence on our regular theme paper, but put just a straight line where the hard word was, like this:

Under _____ cover I am sending you a copy of "The Four Million," a report for the New York State Citizens' Committee for Children and Youth.

Immediately some of your students will vocalize *separate,* and you may say, "Yes, that was an easy one, wasn't it? How did you know that it should

be 'separate'?" They will say that it is a common expression in business letters. "Yes, and there are many other types of clues, too, that we can learn about.

"Now, in your notebook after you have written your sentence on theme paper, write the hard word and the dictionary meaning which best fits the sentence. If all of you are sure to do this, tomorrow we can have an experiment to find out a few things about guessing word meaning."

The following day the students will pass their papers around the room, and each student will guess the meanings of the missing words in the sentences. After all the guesses have been made, have the students exchange papers. Explain that the correct answers need not be exactly the words that were originally in the sentences if they mean the same thing. Then have each student mark the right ones, count the number right, and return the papers to their owners. On the blackboard have a student make a frequency distribution of the number right. The results will probably show that guessing isn't so rewarding as they had thought but that it has some value. What must we do if guessing fails us? The dictionary is the answer.

The next objective is to make the students aware of different kinds of context clues and of the fact that students are not equally skilled in using them. In their sentences they will find examples of definitions that give the meaning of the word in context. The following are other types of context clues which can be revealed to the students by the same method:

Experience. In the experience clue the unknown word is predictable from the student's life-experience. "An exploding skyrocket set fire to a crowded cabaret early today, and fourteen persons were _____." Knowledge of fire and crowded places suggests the meaning here.

Comparison or Contrast. In the comparison or contrast clue the unknown word is predictable as like or opposite to another word. "They were as different as day and night. While he was highly excitable, she was _____."

Synonym or Definition. In the synonym clue the unknown word is suggested by a synonym for it. In some cases this is done through the appositive structure. "The _____, a wizard of great reputation for villainy, gazed scornfully at his victim."

Familiar Expression or Language Experience. This clue uses the student's acquaintance with everyday expressions, common language patterns. "The drowning man was carried to the beach, where firemen gave him artificial _____."

Summary. In the summary clue the unknown word summarizes the ideas that precede or follow it. "At the age of eighty-five the king was still playing a skillful game of tennis. He seldom missed his daily swim. For a man of his age, he was very _____."

Reflection of a Mood or Situation. In this clue the unknown word fits the situation or mood already established. "His arms ached and his breath came harder with each stroke as he kept on swimming toward the shore. Stroke by stroke, more and more slowly, he forced his _____ body through the water."

The purpose of presenting these types of clues is not to dictate the language of identification or to limit consideration to these types. It is rather to suggest the kinds of pattern that may be expected from a study of the language. Students will find their own terms for these types and should be permitted to use them. They will also find that a sentence often contains more than one type of clue. In other cases they will discover too many possible meanings to fill the blank, the clues being vague or absent and systematic guessing less rewarding than the dictionary.

A committee of students can present sentences to the class, all of which illustrate a certain type of clue. The remainder of the class will insert the proper meanings and will name the type of clue given. Five-minute presentations by committees or individuals at the first part of class periods often utilize time otherwise lost in the process of settling down and taking attendance.

Word Analysis [17]. An occasional student will be in the dark ages of word analysis. He will not know the first thing about the sounds of consonants or vowels. The approach to him must be the same as for any beginner. His ear must first be trained to *hear* the sound of the vowel or consonant in words that feature it. Thus he must be able to note in the words *box, bag, bend,* and *bit* a likeness in beginning sound. When he has proved this by picking out the word of unlike beginning in the spoken list, *box, bag, ditch, bend,* and *bit,* the *b* list should be written in a column on the chalkboard for him to observe visually. "What do you notice about the sound of these words? (They begin alike in sound.) What do you notice about the way they look? (They all begin with the same letter.) What do you think that suggests about any word beginning with that letter? (It will usually begin with the same sound.)" Then the student keeps a notebook and lists new words beginning with the same letter. He is given opportunities to meet new *b* words in sentences which contain otherwise familiar words, so that he can prove his ability to use what he has learned.

Sometimes such a student will meet a word which combines two things he knows about words. He may know the sound of *st* in *stop* and *start* and the sound of *-ifle* in *rifle.* He meets the word *stifle.* In helping him with this word, the teacher may write *stop, start,* and *rifle* under *stifle* on the blackboard and have the student notice that the strange word begins like *stop* and *start* and ends like *rifle.* If he needs more assistance, the teacher can cover the *r* of "rifle" and have the student pronounce *-ifle* alone, then add the initial consonant blend of *stop* and *start.*

For such a student, systematic use of the techniques he knows gives the necessary confidence: (1) Do I see a beginning that I know? (2) Do I see a large middle part that I know? (3) Do I recognize the ending? (4) When I put these together, does the resultant word make sense in the sentence in which I found it?

As the student encounters words whose meanings cannot be safely

guessed, he will be inclined to look more closely at the word, delaying the moment when he must rise to consult a dictionary. It might be well to save some of the words from the context study and to say, "Let's look at some of these words. Is there anything about them that might have told us what they mean?"

This question will result in several leads. One is in the direction of compound words, prefixes, suffixes, and roots. In this direction the job will be to have the students become familiar with the meanings of certain word parts and become skillful in recognizing their presence in a word. A compound word must fall into two parts before their analytical eyes. A polysyllabic word must clearly present to them its prefix, root, and suffix as though they were cars in a railroad train. Having separated the parts by analysis of sound and meaning, the students must then reassemble them in meaning and sound to compose the total word.

The other important direction in which this question may point will be rather discouraging to the teacher who has hoped that some bright day a class would appear fully prepared for tenth- and twelfth-grade jobs. Some students will have had measles, have transferred from school to school, will be immature, or have been thinking of other things when they should have been learning certain basic facts about words in the elementary school. When you talk about syllables, they have never heard of them. When you explain that each syllable contains a sounded vowel, they wonder what vowels are. When you explain why one vowel is long when another is short, they see no difference in the size of type. You just have to brace yourself and make the best of it. Let us take these directions and deal with them one at a time. But first let us have this understanding:

1. The study of words will grow out of the students' reading as much as possible.

2. The words will be presented in sentences as often as possible so that the students will be constantly reminded of the purpose of word study and will appreciate the effects of context upon word meaning.

3. Class periods dealing with word study will be short and frequent rather than long, tiring, and rare.

4. The students will be explorers, and we shall be only the suggesters. If the students do the hunting and present their findings to the class, they will have developed the opinion that this work has something to it. Their interest is commensurate with their investment.

5. The resources of the class will be used. We shall find out who knows what and make him the teacher of that specialty.

6. After the initial teaching of any specialty, committees will be formed of those students most needing further training in that specialty and they will be engaged in an activity which requires further study of it. In this manner those who need the work will get it.

Perhaps the students will have shown in their context-clue sentences some lack of ability to handle compound words. Take the words they may

offer, such as *knapsack, deadhead,* and *sheepshearing,* and have the sentences written on the blackboard.

"Do you see a small word that you know?" They will see *sack.* A student will say, "A sack is a kind of bag." They will not know *knap,* although someone may venture "sleeping bag." You will say, "These words are called 'compound words.' Do you know why? Yes, they are made up of two small words, but the first word is probably unfamiliar to you unless you know German." A German student may know that the word refers to eating—*knapsack,* an eating bag. Otherwise the class should refer to the dictionary for it. Then have a student read the original sentences, translating *knapsack* as *eating bag.*

The meaning of *knapsack* is the combined meaning of the two small words. If we know the meaning of both words in a compound, we can usually decide the meaning of the total word.

"Now, who sees the two words in the next word?" Have a student draw a line between the two parts of *deadhead* on the blackboard. "What do you think that word should mean? Sometimes compounds have special meanings that are not easily determined from the meanings of their combined parts. Let's look at the dictionary."

They may find several meanings: a partly submerged log in the water, a heavy post on a wharf for tying boats, a person who gets a free seat in the theater. Have them discuss the probable reasons for the development of these meanings. "Why should a person getting a free seat be considered a deadhead?" Then have them determine which meaning is appropriate to the sentence in which it was found. This activity leads easily into the introduction of the several books available on interesting word derivations.

A word like *sheepshearing* will be more amenable to analysis. Point out that a word like *horse-radish* is hyphenated, whereas *sheepshearing* is written solid. A hyphenated word may be considered two words in the language that are in the process of becoming one but have not yet arrived.

Have a committee of students who easily recognize compounds create a set of sentences or a paragraph containing many of them. Let them write it on the blackboard before class, and have the rest of the class draw vertical lines separating the parts of the compound words, express the meaning of the word in each case, and then read the entire passage translating the compounds. ("The soldier carried his *eating bag* over his shoulder.") Follow this another time by having the less able students hunt for and present compounds or present parts of words for others to reassemble as compounds.

For difficulty with prefixes, suffixes, and roots—lack of recognition of the common ones and lack of knowledge of their meanings—the students need to see several familiar words containing the same part (prefix, suffix, or root —whatever is being studied), to identify the common part, and to determine from the known meanings of the words the contribution of the prefix

to the meanings of the words. This inductive approach reverses the "teacher-telling" situation and causes the student to do his own thinking, arrive at his own conclusions; it gives greater assurance that real understanding has taken place. The important factors in this method are (1) that the words used for this purpose be ones already known by the students, and (2) that the students be given the task of arriving at the generalization based upon the four or five instances which the known words present. If these words are presented to the students in sentences, the students should finally be required to translate the sentences. Thus, "He transmitted the message" becomes "He sent the message across."

Committees of students can be formed for the purpose of reporting prefixed words, suffixed words, or root words (whichever are being studied) which are being encountered in the materials the class is reading. Sometimes a crew can be sent ahead to clear away the roadblocks in material which a whole group of students may be reading. They should be encouraged to present the words *in habitat* so that the solution of meaning may be checked against the probable intention of the sentence.

Whereas most of this type of activity should ideally depend upon the current needs of the class, the teacher may wish to give an initial test to determine class needs and to plan a program of learning during the semester. Such a test might ask the student to mark off the suffixes in a series of sentences easy enough for everyone in the class to read and to indicate in each case what the suffix contributes to the meaning of the word.

Some words that high school students meet cannot be analyzed easily into prefix, suffix, and root. They may or may not contain a small word or word part that is familiar to the students. Therefore, the student must resort to dividing a word into syllables, pronouncing the syllables, and then reassembling them into one word again. Perhaps, then, by reading the word in a sentence, he recalls having heard such a word and is reminded of its meaning. Or perhaps its meaning is suggested by context. Or he may find it necessary to consult a dictionary.

A quick survey of class ability to divide a word into syllables can be provided by the use of words illustrating seven common types of syllabic division. Students may be given a list like *support, lecture, labor, grimly, bugle, drugstore,* and *orchard.* Each of these words has two sounded parts or syllables. Draw a line between the two syllables in each word. *Sup-port* illustrates the division of syllables between double consonants, *lec-ture* the division of syllables between two different consonants whose independent sounds are retained (unlike *ch, th, sh, ph*), *la-bor* the division before the single consonant, *grim-ly* the division between the root and the suffix, *bu-gle* the division before the consonant followed by the *-le* ending (as in *peo-ple, lit-tle*), *drug-store* the division between the small words in a compound word, and *or-chard* the division before the two consonants

whose original sounds are altered by their association (as in *ch, th, sh, ph*). Several words of each type should be listed so that a student's success in the division of the word can be traced rather surely to his understanding of syllables and not merely to chance.

Some students will do well on this test, and some will do poorly. It may be that there is such a clear dichotomy of those who know and those who do not know that the teacher will be justified in occupying the former with profitable activities of a different kind while assisting the latter to recognize syllables.

The first problem is the recognition of vowels as opposed to consonants, having the student underline the vowels in words. The next is the ability to *hear* which of the vowels are sounded and which are not. The word *have* has one sounded vowel, *a,* and one silent vowel, *e.* Since the number of syllables in a word is determined by the number of vowel sounds, *have* has only one syllable, that created by the sounded *a.*

Students should be given opportunity to find the sounded vowels in words that are strange to them and to decide how many syllables the words have. They should learn that *oi* presents one sound even though the two vowels contribute to a combined sound. They should learn that *ai, ea, ie, ow* (as in sh*ow*) have one sound because one of the vowels is silent (the *i* in *tail* is silent, for instance). They should check their solutions with the divisions of the word in the dictionary.

Following this they should learn to apply to short, known words the rules governing syllabication. The rules governing compounds and suffixed words or prefixed words are probably the easiest for a start; then the double-consonant words (*let-ter*) and the two different consonants which do not form a new sound (*hel-met*). Words like *la-bor* may be next. In each case the rule should be discovered by the students (not decreed by the teacher) through observation of the dictionary divisions of words of like pattern, expressed in the students' own best wording, and then applied.

At this point pronunciation of the vowels should be treated. Students should notice by induction that in words ending with silent *e* preceded by a single vowel and consonant, the vowel usually has a long sound (*came, broke*); that a consonant at the end of a syllable follows a short vowel (*cat, let*); that a vowel ending a syllable often has a long sound (*lā-bor, flȳ*). By making a study of such words students can prove to themselves that the exceptions, while numerous, do not render the observations entirely useless. Exceptions to rules of syllabication and vowel sounds do, however, make the use of the dictionary a good thing. It is helpful to the teacher, too, before he presents words to illustrate a certain type of division, for sometimes a word selected for one rule perversely sets itself to following another!

The dependence of pronunciation upon knowledge of vowel sounds requires the student to know something of them. If the student does not know the sounds, he can learn them on a self-respecting level by working with the pronunciation key in the dictionary, finding words like the words in the key, pronouncing them according to the key, and marking them with the proper diacritical marks. Students can try their words out on other students in the class who can profit by the experience. They can make their own collection of words which follow the key words in vowel sound.

Of course, there are matters of accent which are helpful, also. By induction the student can find that the root of a word, rather than prefix or suffix, is usually accented; that otherwise a two-syllable word is often accented on the first syllable; that words of four or more syllables are often accented on two syllables, lightly on one and more heavily on the other.

It is desirable in initiating all these learnings to work with words that follow the rules to be illustrated and that illustrate the rules simply without involving other problems. Once understanding is followed by confidence, the students can endure the disappointment of an occasional exception and can begin to enjoy harder problems. They can begin to submit to their classmates sentences containing complicated, unfamiliar words for their solution.

It is hoped that the point of view toward analysis has been well conveyed: that it is a definite aid to students, but that it is not an end in itself. Since it is only a means to more efficiency in reading, it should be presented as secondary and relative to other reading activities.

COMPREHENSION AND INTERPRETATION

Many suggestions may be addressed directly to students to help them with their comprehension problems in the English field. A few examples given here will stimulate the creative teacher to think of many more appropriate to his students and the materials they are reading.

Summarizing the Main Idea in a Situation, Plot, Character, Author's Thought, Mood. Give in a sentence the event in a given scene or situation: "The wolf ate Grandmother."

Give in a sentence the character or nature of a situation: "The air was alive with friction."

Give in a sentence the personality or general appearance of a character.

Give in a sentence the mood that is expressed in the action, situation, and characters of a book as a whole: *"Ethan Frome* is permeated with the inevitability of tragedy."

Choose alternative titles for a story, news article, magazine article, or poem.

Pantomime briefly a book, character, or scene to be guessed.

Send a telegram repeating the events of a crucial scene in the story; keep it cheap!

Read a summary or title and have the class guess which event or situation or character it is.

Underlining or Stating in Your Own Words the Main Idea in a Paragraph. Underline the main ideas in several paragraphs in your textbook. Where is the main idea usually found? What do the other ideas in the paragraphs do for the main ideas?

Find a paragraph whose main idea is explained by the details.

Find a paragraph whose main idea is justified by the details.

If the main idea is in the second sentence of a paragraph, what does the first sentence do? How can you tell that the first sentence is not main? What words in it suggest the author's purpose in putting this sentence there instead of starting with the main idea?

Write a paragraph giving a main idea. Give the paragraph to another person who must find the main idea.

Find some paragraphs in which the main idea is not stated in any one sentence or two sentences; give titles to these paragraphs.

Give in a sentence the main idea of each paragraph.

What do you have to do mentally to get the main idea of such a paragraph?

Reading for Sequence or Outline in Plot, Character Change, or Organization. Read a chapter of a book, in which a number of things happen. List the two, three, four, or five big things that happen in the order that they happen. Do any of these happen at the same time? How can you list these to indicate that they happen simultaneously?

(1. At twelve o'clock
    a. The hero's venture
    b. The villain's conniving)

In each of these events, who are the actors, what do they do, and what are the results? List these points under the heading of each event.

(2. The drawing-room episode
    a. The characters
    b. The action
    c. The result)

Plan a play. Give it a title. List the things that you would have happen. Make another list of the scenes and the kinds of things you will need for each.

Make a time line of a story as it is told. Some stories go from beginning to end chronologically:

beginning __ __ __ __ __ __ __ __ __ __ __ __ end

Some start toward the middle of the period concerned, go back to the beginning of the time, lead up to the starting point, and continue to the end.

                    — start — __ __

beginning of time ⁀ __ __ __ __ __ __—end

Find remarks by the author suggesting coming events ("But had he gone home as they were led to suppose?").

Find a conversation in your story that makes the plot move—tells you about something that has happened or something that is going to happen.

Find a description of something that has happened and see whether you can turn it into a conversation that will tell the same thing.

In a ballad, such as "Clementine," in what part does the action take place? What does the rest of the story do for the ballad as to thought?

Tell the story of a ballad as a straight story.

Describe a character in the beginning of a story. Make another description of him as he was at the end. How did he change? What did he learn?

List step by step the people and things and events that made a character change during the story.

In a sonnet what does the first group of lines do? What does the second group of lines do? What does the second group do for the first?

In a limerick what do the first two lines do? What do the last three lines do?

As you read a story, notice in what order the author takes up his different topics or events.

In a biography what topics has the author given to various sections of the person's life? How do these topics show what the author considers to be significant about these sections?

In a play list the scenes and tell why you suppose the author chose those particular scenes. Tell what each does for the story.

In a nonfiction book notice the part and chapter headings in the table of contents. What does this inspection tell you about the author's train of thought? How are the parts of chapters related to one another?

Reading for Significant Details. From a story or poem select a passage that you think is very vivid. What has the author done to make it vivid?

Make a picture or a diagram showing exactly what the author has made you see.

Select a character that you like. What has the author done to make you like him?

Select a character that you dislike. What has the author done or had him do to make you dislike him?

List the things that happen on a few pages in your book. Does the author tell you about them through his own comment? by having the characters act them through? by having the characters tell what happens?

Use a similar technique in a story of your own.

Select a trait that you think a certain character has. Go through the story to see whether the author reveals this trait by his own statement that the character has it, by the character's actions, by the character's words, by the testimony of other characters.

Use similar techniques in a story of your own.

Select one of the ideas about life that you feel a story has suggested (virtue is rewarded; evil will out; never live with a mother-in-law). Go through the story to find out in what ways the author has made you feel this.

As you read a story or an article and find yourself having certain emotional reactions to it, try to note the things that the author has done to produce this effect upon you.

Appreciating Description. List the events that occur in a story, a play, or a

narrative poem in preparation for judging their plausibility or truth in life as you know it, seeing how the author has built up to a climax or seeing whether the events justify the ending.

List the details that the author gives you about a character, in preparation for drawing a picture (physical features), inventing a scene that the author omitted; demonstrating the character's traits; writing a letter such as this character might have written to another, showing what kind of person he is; discussing the consistency or inconsistency of the author's portrayal; showing the monotony of the author's repetitious descriptions or the variety of ways he has of saying the same thing; making a comparison of this character with someone you know.

List the details in the description of a room, a landscape, or some other setting in preparation for painting a picture or making a mural of it, planning to dramatize the story. Notice the things that give the description a mood of gloom, gaiety, impending doom, mystery, etc.

Studying Sentences of Various Kinds. Find the subject of an inverted sentence. (It will be toward the end.) Find the predicate. (It is the expression that tells what the subject did or was.) "There in the gloom where the willows stood were two shining eyes." What does the author achieve by turning sentences around, putting the subject (the thing talked about) last? (Suspense, variety in sentence structure, fluency of style, emphasis, rhyme ending, etc.) Rewrite an inverted sentence as it would be if the author put the most important thing (two shining eyes) first.

Rewrite the sentence, putting the subject and its modifiers (words and phrases) first and the predicate and its modifiers second.

Write in your own words what the sentence means. If the meaning of a long sentence is troublesome, two reasons are usually that retention of a long passage is difficult and that the sentence has two or more related thoughts in it.

Take a sentence that is long and puzzling. See what the punctuation tells you (commas, semicolons, colons). Try to identify the clauses as dependent (stage setting) or independent (the act). Find the subjects and predicates of the clauses. Decide what the other words and phrases modify in the sentence and what they do for the sentence.

Write a statement of fact in two words. (It rains.) Then write before it a dependent (stage-setting) clause telling *when* this fact may be. (When the stars do not shine, it rains.) Separate the clauses with a comma. Add to the dependent clause a phrase telling *where* it may be. (When the stars do not shine in Podunk, it rains.)

Practice condensing dependent clauses into phrases. (When the stars do not shine—on a starless night.) Similarly you can mentally shorten the long sentences that trouble you.

Comprehending Compact Writing. In a poem in which every word is burdened with meaning, read the sentence carefully trying to get the whole meaning.

If this fails, find the subject and the predicate and then decide which phrases and words modify each. Reread the sentence, rearranging the phrases and words, if necessary, to clarify their relationships to the subject and predicate.

If the sentence still defies understanding, notice each word and phrase again to see whether a different meaning may be attached to any of them (1) through

the application of a different dictionary meaning, (2) through taking the words in a figurative sense, or (3) through looking up certain words whose historic or literary meanings have escaped you.

Clarifying Circuitous Language. Notice the parts of the sentence that seem to cause difficulty. Often this is a negative or a double negative: "Thou art not unlike an onion." *Not* is one negative; *un* is another; the two cancel each other and produce, "Thou art like an onion." Sometimes it is the presence of many qualifying phrases: "even the best of them," "such as _____," "regardless of _____," "more than any other _____," etc. These expressions are usually set off from the rest of the sentence by commas. Look for such signs of their presence. Read the sentence without these qualifying phrases and say in your own words what the meaning of that much of the sentence is. Then approach each qualifying phrase individually and add its meaning to the meaning of the sentence. Sometimes it is the presence of many qualifying clauses. In addition to using the same technique as that suggested above for phrases, translate these clauses into shorter phrases: "certain of being alone," "till death." Sometimes it is the presence of interrupting words, phrases, or clauses which do not contribute to the main thought but comment upon it: "assuredly," "indeed," "without doubt," "on the other hand," etc. Sometimes it is the avoidance of a shorter and more common expression in favor of a less common or more poetic expression: "They left the place" avoided in favor of "They undertook to evacuate the place"; or avoidance of a longer and more common expression for a shorter, less common one: "He had no other possible choice" avoided in favor of "He had no alternative." Translate these less common expressions into the equivalents to which you are more accustomed, "the words you know better." Sometimes it is the presence of certain figures of speech: "just as the gull in his flight . . . ," etc. These expressions are intended to enrich meaning but actually present an obstacle to it if they are long and frequent. Use the same technique as that suggested for phrases. Sometimes it is the presence of phrases and clauses that make very fine distinctions and thus keep the reader's mind running from one comparison or contrast to another, drawing lines of fine distinction the while: "A slice of corned beef, neither too hot nor too cold, served with just a dash of mustard, which in excess is not unpalatable but in moderation is a delight. . . ." Use the same technique as that suggested for phrases.

Reading to Sense Evidences of Emotion or Feeling in a Character. Given the character in a situation to which he will show a feeling or emotional response, the reader's objective is to piece together the evidences of this feeling or emotion and determine its nature—anger, despondency, joy, grief, the mixture of love and sorrow at parting, etc. The feeling or emotion is the main idea of the passage and is to be comprehended by means of the several evidences or clues. The first task, then, is to note these clues; the second is to piece them together, perhaps by imagining your own reactions in a similar situation, and to generalize them into an emotion or feeling. The first task is to read for details; the second is to infer and to generalize, asking the questions: Why does the character think or do these things? What feeling or emotion might prompt all these thoughts or acts?

The author will give these evidences or clues through what the character says or does, what the character is said to think, what other characters say or do

about him or in reaction to him, and symbolism in the environment (gray day—gloomy mood). Sometimes what the character says is a direct expression of emotion: "I hate you!" Or he may use an expression from which the emotion may be inferred: "He is such a little boy," meaning "I am his mother and should stay with him; yet I must go,"—hence love and regret; or, "Evidently there is no basis on which we can reach an agreement," meaning, "You are being difficult and I am impatient with you." Sometimes what the character does is a direct expression of emotion: a slap, a stamping of the foot, a kiss, tears. Or it may be an expression from which the emotion may be inferred: bringing father's slippers or straightening his tie—concern for his welfare and hence, love; crushing a flower (symbolic)—suggesting the desire to destroy someone or something else beautiful but hateful. The character may think aloud or the author may tell how he feels and what he thinks. Other characters may discuss the character's situation: "I don't see how he puts up with it"; the character's actions: "Did you notice how he looked at it?" or words, interpreting them to suggest how the character must feel.

In an effort to discern a character's feeling or emotion, note the ingredients of the situation and imagine how you would feel in his place; notice what he does and says, what, according to the author, he thinks, what other characters have to say about him and how they act toward him, points about the environment that seem to have no significance unless taken as symbolic of the character's feeling or emotion.

Reading Creatively to Infer, Draw Conclusions, See Relationships. In predicting events, consider the background events, the situation, the characters involved, what is said and done, and then decide what is likely to happen next. Considering the character involved in a situation, his disposition, his feelings, and his motives, what action do you anticipate? In a situation of strife or indecision what do you think will happen? Why? From the author's description of a place what kinds of activity or problems would you expect to arise? Give your reasons. What hints do you find in a conversation that suggest how a character's opinions are changing or what his future actions may be? Give your predictions about these opinions or actions.

Comparing the Feelings Portrayed with Own Experience. Tell how the expressed feelings of the author are similar to yours or different in a like situation and what his reaction offers as a suggestion for your living. (For instance, he may be philosophical about a loss; you, rebellious.) Tell to what extent your feelings would be the same as or different from those of a character in a given situation, and give reasons. Think of a place you know that is like the one described in a story. Tell why you think the story might or might not have taken place in the situation you know. What does the author make you feel about the situation, about people, about patterns of life or the lack of pattern in life?

Understanding the Author's Point of View. An author of a story makes his point of view evident by the way he makes his characters act and speak, by the things he causes to happen to them, by outright statements of his opinions, and sometimes by the title of the story. An author of an expository article states his opinion openly, usually in the introduction and/or the conclusion of the paper and sometimes in the wording of the title. Give evidence and draw conclusions as to the opinions of an author of a story or an article.

Recognizing Structural Relationships. In a poem of several stanzas, what happens in each stanza? Is each stanza in some way a unit in thought? In a sonnet decide what the first stanza does for the second; what the second does for the first.

Understanding Figures of Speech. When the author likens someone, something, or a situation to something that it really is not, he is actually making a comparison helpful to the reader's appreciation of the person, object, or situation:

> "Thou'rt like unto a lovely flower.
>   So fair, so graceful, and so pure"

clearly states the way in which the maiden reminds the poet of a flower. "We have given our hearts away, a sordid boon" suggests that we have freely rid ourselves of a quality most essential to our being. The poet considers this quality so vital that he compares it to the heart itself.

To benefit from the author's full meaning, consider his figures of speech and determine the qualities that he finds alike in the two situations, people, or things. "The road was a ribbon of moonlight"—the qualities that a road and a ribbon might have in common would be smoothness, slenderness, length, and gentle curves; the quality of the road and the moonlight would be a silver cast and glow. Find places in which the author helps you to see something more clearly by means of such figures. Show how the object is described indirectly by the comparison.

Finding Cause and Effect. In a story notice the feelings of the characters, the way they act, and the situation. What are the possible results of this situation? Which do you think the most likely result considering the way the characters feel and the way they usually act? How do you think such and such a character felt in a given situation? How does his feeling have bearing on what happens later?

Note the factors that led to a certain result. From the description of a room, what do you expect the owner to be like? From the description of the country and climate in which the characters of the book live, what kind of people do you expect the characters to be (poor, uninformed, agricultural, lazy)? From the description of the situation in the beginning of a story do you expect the story to be funny, sad, gloomy, frightening? Why?

This present chapter on the improvement of reading in English classes has tried to show that improvement can come if goals, content, materials, organization, and methods are designed to allow for the facts of reading growth. But the value of such improvement would be little if the values of literature were lost. There is a middle ground upon which we can meet the requirements of a broad orientation in literature and the kinds of ability with which our students come equipped. If we really love books for what they can do for human beings, we shall create conditions for reading growth which will make the love of literature possible; and if we really love human beings, we shall make their school life endurable as well as profitable by reasonable expectations and much help.

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CHAPTER 6

Improvement of Reading in the Social Studies

The good reader of social studies materials [9] tends to have a broad, specialized, social studies vocabulary, accurate understanding of time and place concepts, good command of metaphorical language, strength in general vocabulary and sentence and paragraph comprehension, average or better intelligence, middle or upper socioeconomic status, liberal social views and conservative economic beliefs, good academic grades, an active school and community life, and a liking for reading. But he is a rare bird. No matter how well they get the facts, if they do get them, many of our students tend to remember only those that support their own points of view, interpret them in such a way as to support their viewpoints, and accuse the author of prejudice if his viewpoint is opposed to their own [10, 24, 25]. At all educational levels, the social studies teacher must be an ardent, patient teacher of reading and thinking.

SOCIAL STUDIES BOOKS

Ideally, social studies books should be well organized and written in a straightforward way. Facts should be presented in logical order with clues as to their relative importance and sequence. Various clues are given by good writers: chapter headings, section headings, and marginal headings serve as useful signposts. The author sometimes begins the chapter with a question that is worth keeping in mind as the keynote of the en-

tire chapter. Sometimes in the first or second paragraph the main idea of the chapter is suggested, while in a final paragraph or section all that has gone before is summarized. Some pages show clearly a sequence of events in a life or a period of history; others contain paragraphs setting forth a main idea that is important in itself, whether or not the details are retained; while in still other instances the main idea is useless without the supporting details that accompany it, as in a paragraph starting, "Many factors contributed to the downfall of this civilization." In some kinds of material the author vividly presents the characteristics of something or describes in detail conditions prevailing at a given time. Keys to pronunciation and explanations of charts, maps, and graphs are other ways in which the author aids the reader. Illustrations and details add human interest and make the main points memorable. Sufficient facts should be given so that students can make their own generalizations and then check them with the author's summary statement.

Actually many social studies books fall far short of the ideal. They are often of great density—too many unillustrated, unsupported facts are crammed onto one page. To do justice to these fact-packed texts, one would have to be a specialist in the field and read more slowly than homework time permits. And since the author frequently gives no indication of which ideas are most worth remembering, the student is puzzled as to what the author expects him to retain from his reading. Sometimes the book is too selective; it includes only the facts that prove the author's point. In this case critical thinking is impossible unless one reads other sources.

Few authors start where the reader is. Most seem to assume that the reader is an ardent historian or geographer who needs no motivation and no guidance in journeying from his known world into the strange territories dealt with in the book.

Many social studies books present unnecessary vocabulary difficulties. Technical words are introduced too rapidly. If they are defined, the definitions are sometimes as difficult to understand as the words themselves. Sometimes the pictures illustrating the strange words are the most deceptive of all. A Roman aqueduct, for instance, is represented by a group of people standing on a plain with some archways faintly outlined in the distance.

Not enough use is made of diagrams, maps, and pictures which clarify concepts. The television technique of showing, not telling, might well be applied to more social studies books. In geography, maps of the country, pictures of the people and their land, charts on the relative production of various foods, and graphs of production or population changes facilitate understanding and retention.

It is encouraging that the authors of a few recent textbooks have done much to overcome these shortcomings. Social studies textbooks can be

improved. Peterson [27] demonstrated experimentally that high school students' comprehension of passages from a widely used senior history textbook was increased when the passages were rewritten to enhance their interest and improve their logical organization. Even more striking was Wharton's finding [40] that by merely substituting picture-forming words for the abstract and colorless words in passages from a college history text, which were otherwise the same, one could raise comprehension scores. Among the suggestions which these researchers made to writers of textbooks were the following:

Use logical sequence of ideas and coherent organization.
Use familiar or dramatic experience as introductory material.
Be consistent in a point of view or frame of reference.
Utilize experiences common to young people.
Introduce a minimum of essential new words. Use familiar words in explaining unfamiliar concepts.
Whenever appropriate, use words that are specific, active, or both.
Use words with multiple sensory appeal.
Present clues in passages to enable the reader to make his own correct inferences.
Insert details to clarify main idea.

THE READING PROCESS IN SOCIAL STUDIES

Sochor [33] found that verbal intelligence is intimately related to ability to read in the social studies, and that literal and critical reading in this field are relatively independent abilities.

What the teacher expects determines to a considerable extent how the students read. If a geography teacher requires practically verbatim accounts of the content, the pupils learn to supply them as best they can. But parroting the author's words is not evidence of true understanding.

How to Read Geography. To make sure of the pupils' comprehension, the teacher will encourage them to consider pictures, maps, charts, and graphs as well as verbal statements in answering, in their own words, thought-provoking questions. If the author has dealt with the physical conditions apart from occupations or human adjustment to environment, the teacher may ask, "How can you tell the kind of country these people live in by the kind of houses they build?" Such a question causes the pupil to cut across the author's organization and make his own groupings of factual material for a given purpose. When asked, "What other people whom we have studied lived like these?" the pupil is led to make comparisons between present and previous learning and is helped to retain knowledge which might easily be forgotten but for this creative repetition.

To achieve a high quality of thinking in geography, the student must learn to profit by all the aids that enrich the meaning of technical words,

the understanding of certain regions, and so on. He must associate general characteristics with particular information. For example, to associate cheese and watches with Switzerland makes little sense unless one knows other things about the country. As he reads, the student should also make associations with his observations of his own society and environment.

Getting information from maps takes a specialized kind of reading. Just as a student has to master the vocabulary in a foreign language, so he has to learn the symbolic language of maps. Just as his impression of descriptive passages gains in vividness when he pictures the scenes described, so his reading of maps becomes more realistic if he visualizes the rivers, glaciers, and other features of the landscape indicated by maps. He needs to be taught to recognize that a map is a ground plan drawn to scale; to read a descriptive story from maps; to read different kinds of maps; to progress from simple to more complex maps; and to read maps in order to learn [21, 26].

How Students Read History. Instead of repeating the general procedures of using all the clues the author gives as to organization, of paragraph reading, and of reading creatively with an active mind, let us listen to two students who read selectively according to recommended methods:

I like to read more than one textbook on the same subject, and I also like to read comparative material on similar subjects. In other words, when I read about the Monroe Doctrine, I also like to read about the Pan-American Union. In looking up a specific subject, I naturally use the index of the book and also other references.

As to reading history, it depends on what I am reading. For instance, when looking for facts, I read the whole article, not skipping any of it, and pick out mentally the important points. When I am looking for an answer, I read until I find it. When I have questions to answer I can learn more easily. I read according to some plan—i.e., have some idea of what I am looking for.

The opening sentences of paragraphs are my best help in review. They usually bring to mind the important material included in the paragraph; sometimes they are detour signs which steer me away from unimportant material. In this way, I can recall or read again the important matter of the review.

I read with anticipation of the outcome. And I try to read with an open mind, with imagination, and with a thought of how the last sentence connects with previous passages.

Keeping Up with Current Events. Students should be encouraged to read critically newspapers, news magazines, and books on current events; to listen to news broadcasts and commentators; and to interpret modern events in the light of historical perspective. If, as in one class, the students choose to spend thirty minutes a day on discussion of current problems, the retarded readers may begin with an easy current-events magazine such as *My Weekly Reader* or *Current Events* and gradually acquire enough skill to read the daily papers.

The reader of news stories is presented with a characteristic pattern which he must recognize if he is to read efficiently. The first sentence or paragraph usually gives the whole idea in a nutshell. Subsequent paragraphs elaborate upon the first, giving details and suggesting implications. If the article is longer, a detailed reiteration of the whole matter is given, sometimes with various persons' reactions or predictions concerning it. For the reader who wishes to get at the truth of a situation, this third part is often the most fruitful because it goes beyond the reporter's summary and the interpretation given in the headline to supply the actual sources for these generalizations.

Hence, the reader who is on the lookout for propaganda will read the first two parts to sense the reporter's bias, and then find the facts on which the headlines and the preceding summary and interpretation are based [11]. Are the reporter's facts sufficient justification for the statement in the headlines? If not, what effect does the headline have on the reader? Does it make him indignant, overoptimistic, hostile? And why might the newspaper have wished to produce this effect?

It is enlightening to read a newspaper article on a controversial issue and underline the words that prompt you to a favorable or unfavorable reaction to a given side of the issue. An analysis of the headlines of several newspapers with different points of view also reveals how words are used to influence readers' attitudes. If an author presents two sides of a problem and draws a conclusion, we should study the facts carefully to see whether he does justice to both sides. Does he slight the arguments that favor the side he opposes? Does he neglect to mention certain facts that weaken his argument?

A person who wants only the superficial gist of the news confines himself to the headlines and possibly the first paragraphs. "Yanks Have Enemy on Run" satisfies him, whether it means one enemy or an army; he is glad if the news is cheerful and does not care to know whether it is propaganda intended to keep up his morale. The person who has performed in a play the preceding night skims the opening paragraphs about the performance to find his name and the comment upon his acting. The reader who has a pet theory about which he expects to be challenged by an argumentative luncheon companion reads an article only to note the facts that will support his side that noon and ignores the presence of plenty of information on the other side. So it can be seen that while a given article may have certain characteristics that determine to some degree how it will be read, the reading may still vary considerably according to the individual reader's purpose.

How does the teacher interest students in keeping up with current events in the daily newspapers? Teachers have used the procedures described here successfully.

Ask students to be ready to read to the class each day a short but important news item. Pupils of high school age in a special class did this

for a year. One of the pupils made a gain of two and a half years on standardized reading tests during the year. When he was asked how he did it, he said, "Well, we could read a news story to the class each day, so I'd look over the paper and get my big brother to help me read out loud the one I thought best." Other pupils mentioned this experience as their favorite part of the social studies period.

"Today's Headlines" was another popular exercise used with groups of retarded readers by Rauch [28]. "Decapitated news stories" stimulated students to get the main idea of a news story. They were given the story with the headline or brief summary cut off. They read it, wrote their own headline and summary, and compared them with those which the original reporter wrote. There is an element of excitement in seeing how closely you agree with the reporter who wrote the story.

A bulletin board for clippings calls attention to news items of interest to members of the class. At first, pupils may bring in only pictures and news stories of crimes and sports. Gradually, however, they learn to see the drama and importance of other kinds of news items. A committee can file the clippings of permanent value under topics and problems which the class is studying.

CLASSROOM PROCEDURES

The effectiveness of any procedure depends partly on the student's study habits and even more on the degree of skill with which the procedure is used. There is no one best method; different individuals may find that different methods such as rereading, making marginal notes, outlining, or précis writing help them to learn. Research is needed to obtain more definite information on this problem.

Finding Out How Students Read. Every teacher should know what each student in his class is getting out of the social studies text and reference reading. He may use a standardized test. Certain tests in the social studies purport to measure abilities in line with sound objectives. The Progressive Education Association Test of Application of Principles in the Social Studies was an attempt to measure ability to see logical relations and ability to evaluate arguments. The Social Studies Test of the College Entrance Examination Board [34] is designed to test students' knowledge of factors, trends, and means-end relationships, their attitudes and motives, and their understanding of key words and basic facts. It appraises ability to organize, to interpret, make, and apply generalizations. Independent school norms as well as those for public schools are available for this test. The Cooperative General Achievement Tests: Test I, A Test of General Proficiency in the Field of Social Studies,[1] measures the student's acquaintance

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[1] Published by Educational Testing Service, Princeton, N.J.

with social studies concepts and his ability to interpret reading selections, graphs, and maps in this field.

The social studies teacher may also use a test he has made. A test constructed by Margaret Martin Conant [8] may well serve as a model for teachers to use in constructing their own informal tests. As suggested in Chapter 15, test exercises should be repeated following a period of instruction after an initial test has been given. If the responses on the first test are poor, the teacher may well devote part of one period each week to a series of exercises designed to correct weaknesses, each followed by discussion and by instruction in methods of getting more out of the reading of social studies in less time.

Enlisting the Librarian's Aid. The librarian is a very present help to the social studies teacher in finding books, especially for the retarded readers, which are pertinent to the themes his class is studying. For example, in the seventh grade, references may be needed on improving home and family relations, soil conservation in our community, survey of world resources. In the eighth grade the teacher may need a wide range of reading material on such topics as how people from other countries have contributed to American life; America, a land of farms and factories; America, a land of opportunities for aesthetic and moral living.

Batchelor described the cooperation among librarian, library supervisor, principal, and teachers in using the potentialities of the library for enrichment of various subject fields:

Two classes of below average ability were about to study the topic, "What Animals Provide Food for Man?" Texts and supplementary books provided little material on the subject. So the librarian and teacher discussed materials at some length, after which an appointment was made for the class to visit the library.

In the intervening days the teacher outlined the topic and discussed plans with the class, while the librarian gathered materials at an easy reading level. She prepared and displayed materials on library tables. When the class arrived, students were assigned to tables while the teacher and librarian moved about helping them. Considerable assistance was required. The class returned twice to the library for further study [3, chap. 10].

The Dalton plan or unit organization provides opportunity for individual initiative and independent study. This is the way it worked in one high school:

In our world history classes we use the unit method. During each unit the student is expected to work on either an individual or a group activity. He is usually permitted to select the type of activity he prefers. Many suggestions are given, but if the student has a personal interest or can suggest an original activity on the topic we are studying, he is encouraged to follow it. He is given a card on which he writes his name and the activity on which he has decided to work.

Before the students go to the library to work on their problem, the librarian and the teacher take the cards and jot down one reference on each. In suggesting books, they consider the student's ability as well as the topic on which he is working.

In this way the student is not overwhelmed by a long list of books, and he has something with which to start. After he has read the information from one book, he can use the card catalogue, the *Reader's Guide,* or other sources to find additional information.

The librarian has found this card system a great help because she knows, in advance, the topics on which the students are working and can frequently arrange special exhibits. It also gives her a better backing for talking with individual students regarding their problems.

Guiding Students' Home Study. When a teacher merely says, "Read the next fifteen pages," the student has little idea what to do. Is he expected to get a general impression? be able to recite the main ideas? answer questions on details? hand in an outline? take an essay-type test? take a true-false or multiple-choice test? find out what the author's intent and viewpoint are? judge the authenticity of the content and separate fact from opinion? know the relative importance of events? make inferences, draw conclusions, arrive at sound generalizations? sense the sequence of events and how the present grew from the past? make application to present-day problems? Unless the teacher gives students some guidance in what to read for, they "cover" the pages in a desultory way and emerge from the reading with a few scattered ideas. The teacher can create readiness for reading by reviewing related facts known by the pupils, helping them to clarify the concepts they will encounter, raising problems that can be solved through reading. The well-planned assignment is closely related to the problem-solving method and provides for pupils with varied reading abilities.

Grouping within a Heterogeneous Class. Using the results of informal tests, the teacher in a heterogeneous class may form flexible subgroups of four or five who need special instruction and practice in particular reading skills. Each of these groups has a leader who can help the group while the teacher is engaged with other groups or individuals. The students plan the work in their groups and make suggestions for carrying out the plan. Often the students interested in a particular topic or problem form a subgroup. All levels of reading ability may be represented in each of these groups. By selecting books on his level from the class library, each member of these interest groups can make a contribution to the topic under study.

The success of these subgroups depends on their having access to much relevant reading material on different levels of difficulty and on their learning to work together in small groups without constant supervision by the teacher. A goal, such as presenting their findings to the whole class,

is another incentive to successful group work. Responsibility for presenting oral reports stimulates effective reading. Through this experience the students also begin to think of reading as communication and to realize that knowledge gained through reading should be shared with others, not merely filed away in one's own mind or in a notebook.

Rowlands [29] described in admirable detail how subgroups in a social studies class improved their procedures of working together:

The main problem for study was suggested by one of the pupils. He said that his father had stated that "a World Federation of Nations was just as impossible as the Articles of Confederation proved to be." This comment started the class off on their study of the Articles of Confederation and "its one crowning achievement, the Northwest Ordinance."

Subgroups chose different aspects of the problem. Finding the textbook too brief, they went to the library. Realizing their need for more efficient library skills, they reviewed and used the library techniques which they had neglected. Key words that might lead to information needed were written on the board under each topic. The pupils worked independently, asking for help only in an emergency. They kept a diary record of their procedures, including any items that shed light on the group process.

After two days in the library all the pupils reported to the classroom on the third day. These classroom days were spent in (1) sharing interesting and relevant material which other groups might need, (2) raising questions and problems, and (3) reporting progress. Another day was designated as "problem day"; it offered opportunities to improve reading and study skills. For example, the class felt the need to improve their vocabulary; their efforts to choose the best word led to semantic analysis. To improve their notes, they took notes on a chapter while one student read it aloud and then compared and discussed the results. This practice helped them increase their ability to state main ideas and relations in their own words. The reports of each subgroup helped to develop communication skills. The members discussed various methods of presenting their reports and then selected the one that seemed to be most effective.

Introducing Songs of the Period. Singing, too, has a place in the social science class. Many songs written about historical events, legends, and people arouse interest in and supply background for the reading of history. For example, an eighth-grade group that had been studying the Civil War chose as a project "Songs of the North and the South." The students asked whether they would be permitted to sing in class the songs they had found. The teacher said that they might if they would take responsibility for the program. It was the best student-conducted class of the year. They all enjoyed reading about John Howard Payne and Stephen Foster and singing songs they had written. Through the songs they became acquainted with new words and word sounds in an entertaining way.

A group of seventh-grade students became interested in Erie Canal

ballads. Although the music for these was not readily obtainable, they got the feel of the songs by reading in rhythm. Even the dialect did not bother them. They liked "Low Bridge, Everybody Down" best. These were social studies periods that the students enjoyed and remembered.

Reading for Pleasure in the Social Studies [32]. In a unit on the expansion and settlement of the West the class decided to share their reading in a round-table discussion. To obtain a wide variety of books, a committee chosen by the class went to the librarian to see if books could be assigned to their class. The librarian was very cooperative; she sent to their room forty-eight books on westward expansion. The teacher gave out a mimeographed annotated list of the books which the pupils perused immediately. Excerpts from the class discussion follow:

PHYLLIS: Good! Another list. I check all the books that I want to read.

BILL: This is good! I'm sure this will be the best unit yet.

ARTHUR: Look, here's the book *No Other White Men*. I read that and it's swell. I got it in English class through the Teen-age Book Club. It's all about the Lewis and Clark Expedition out west. And they were the only white men out there where all the Indians were. Their guide was an Indian girl. Just think, they had been where no other white men had been before.

SKIPPY: That sounds good. (To teacher.) Can I have that one?

TEACHER: Yes, you may read any book you wish. . . .

(Pupils continue to talk about the books they want to select.)

JAMES: Oh here's one—*Riding West on the Pony Express*—but I don't see it.

PEGGY (standing near): I have it, but I don't want it. (Gives it to James.) I have picked *Grandmother Brown's Hundred Years*. That looks more interesting to me.

TEACHER: Yes, I believe you'll like that.

PEGGY: It's about pioneer life in Iowa and shows the changes that have taken place over an entire century. Bert, can you find a book?

BERT: Naw, I don't see anything here that is interesting. . . .

TEACHER: What sort of stories do you like?

BERT: I dunno. Don't read much; not much time.

TEACHER: I see. What do you do when you're home?

BERT: Help my father. Him and me make boats.

TEACHER: You do? Your home is on the Bay, isn't it?

BERT: Yep.

TEACHER: I wish I had more time to go out on the Bay than I do, and I wish I owned a boat. . . .

(They talk about experiences on the Bay.)

TEACHER: I think, Bert, that there is a book here you may be interested in. It's called *Keturah Came 'Round the Horn*. It's about travel all the way by sea from the East Coast around the southern tip of South America and on up to California (showing Bert the sea route to California on the wall map).

BERT: Uh-huh—you mean they had to go all around there?

TEACHER: Yes, you see, the Panama Canal was built shortly after 1900. This story takes place in the 1840s.

BERT: Sounds pretty good. (Finds and starts to read his book. The whole class has chosen books and started reading. They read for the remainder of the period.)

The next social studies period was spent in reporting, discussing, and organizing the ideas about westward expansion which they had obtained from their extensive reading.

Clarifying Social Studies Concepts. Shepherd [32, p. 44] also described how the pupils' concept of the word *constitution* was clarified through referring to the use of the word in their experience—the student council constitution. From the discussion of the student council constitution Dick was able to define the word *constitution*. He said: "It is a written paper telling us how our government is set up, with regulations as to powers of our government. And also it would list qualifications for members of the government before they hold office."

The word *union* as it applies to labor organization was illustrated by Joe from his personal experience. ". . . I have to pay two dollars and a half every month in union dues," he told the class, "because I clerk in the grocery store" [32, p. 44].

The use of context in deducing the meaning of an unknown word was illustrated by a discussion of the meaning of "social reform" [32, pp. 52–54]. After reading the text in which the words were used, Loretta said, "Well, it's about things that affect people." Richard added: "Yes, they include laws relating to working, schools, debts, taxation, monopolies, and voting. They're things that affect all people—not just the worker."

The use of the dictionary to explain a new word was illustrated in connection with the word *labor* [32, p. 34]. Betty's declaration that *labor* means "to work" dramatized the fact that words have more than one meaning. Betty's definition did not seem to apply to the word as it was used in the text. When Barbara looked it up in the dictionary, she exclaimed, "It has ten meanings!" Leona selected the meaning that applied in the social studies text. "That's the way it is used in our textbook. For instance, there is a paragraph head, 'Organized Labor after 1815.' That certainly doesn't mean organized work, but organized labor, like a group of workers who are organized." Relating new concepts to one's experience is an effective method of vocabulary building.

Reading in a Social Studies Class of Juvenile Delinquents [36]. The majority of this group of boys and girls were reading little except such essentials as letters from home. Some pupils buried themselves in current comics. The girls, who read more, devoted their attention to love-story and true-confession magazines. Some boys picked up crime and detective novels, and a small number followed the sports sections of the tabloids. Collectively the pupils' one strong motive in scanning newspapers or other

reading material was their absorption in sensationalism—crime, love, and murder were at the heart of their reading interests. One boy could relate in detail every escapade of John Dillinger, and another scanned the headlines for the latest news about "Bugsy" Goldstein. These interests represented little potential to build upon. Yet it was on this initial reading interest that the teacher, Frieda Kurkhill, began to develop the program. She put up extensive bulletin displays featuring sensationalism in every form from Al Capone to Adolph Hitler. By slow degrees she introduced other clippings concerning current events, the wonders of science, the glamour of sports, side by side with sensational subjects, all within the pupils' range of vision. They could not fail to notice these other news items which increased in number with the pupils' growing interest. Before long the pupils began bringing clippings for the bulletin boards, and cutting up newspapers for cartoons, comic strips, pictures, or short articles. They also printed captions for specialized bulletin boards for news—"Have You Heard?" and for sports and hobbies—"Let's Play!" After these clippings had been on the bulletin boards for a time, students filed them for permanent reference. This material was much consulted. The pupils knew where they could find information since they themselves had built the file. By this process, which might be called "educational seduction," the transition was gradually made from sensational news to "good" news in small doses, from news comic strips to news stories, from adventure in crime to adventure in the current struggle of nations.

Another feature of the program likewise developed naturally out of the activities in which the boys and girls were engaged. After a social event one boy asked, "What do you say to your partner when the music stops?" This question led to a discussion of conversation and its enrichment through wide reading. With this additional motivation the news brought in to be shared with the group progressed from reports which dealt largely with such subjects as murders, robberies, escaped prisoners, suicides, and boxing bouts to some reports of world significance, vocational importance, and wholesome outdoor interest. Needless to say, the pupils' initial interests and contributions were never ridiculed, rejected, or disregarded. Instead they were used constructively to promote critical thinking in the areas in which the pupils were most familiar. Moreover, better sources of information, such as *Young America, Current Events, Our Times,* and the best local metropolitan newspapers, were made available to the class for cooperative use and for "overnight reading."

Supplementing these news-sharing discussions, prereading discussions helped pupils acquire a sense of continuity— (1) What has led up to this event? (2) What do you predict will happen next? Why? (3) What will you look for in today's reading? Follow-up discussions were guided by such questions as (1) How did your predictions work out? (2) How do you know whether the information is accurate? (3) Is there any evi-

dence of biased opinion in the article? (4) What questions does the article raise? (5) How are words used to influence your feeling about a certain person or group, or event?

Many other kinds of materials and activities—a radio in the classroom, weekly educational films on contemporary life, a school publication—in addition to the bulletin-board displays, clipping file, conversation period, dancing club, integrated periods of English and social studies, and provision of individual copies of daily newspapers and student newspapers on different reading levels—all combined to improve these pupils' adjustment through reading.

Providing Suitable Reading Material. To build up their class library, the teacher and pupils in one large city school collected pictures, maps, pictograms, charts, books, and magazines from many sources. They spent some time learning how to read each different kind of pictorial material as it was brought in.

A wide range of difficulty was represented in these reading materials. For retarded readers there were books in the Unit Study Series [37] and the Poughkeepsie Writers' Guild Series. From the annotated bibliography *Gateways to American History* [4] the teacher selected relevant references at appropriate levels of reading difficulty. For individuals who needed practice in reading skills she provided workbooks or separate practice exercises in skimming, interpreting paragraphs, finding the central thought of a passage, locating pertinent information, and other skills.

Helping pupils build their own reference file is another way of supplying relevant reading material. It is also a valuable reading experience. The process has been described as follows by a high school teacher:

In my social-studies classroom I have two files, one legal size, the other 5 x 8 inches. The materials in each are arranged according to the units we are studying.

The legal-sized file is used for clippings, pictures, and magazine articles. Whenever I or any student comes across an article or picture that we think would be suitable for a particular unit, we give it to the committee in charge of the file for that unit. Since we have a limited space in the file, at the end of the unit the committee goes over the material brought in and decides what is worth filing for future use.

In the 5- x 8-inch file we put suggested activities and references. Frequently a student comes across a book suitable for a particular unit, for which I have no card. He makes out a card giving the following information: author, title, city, publisher, and copyright date; and notes whether it is in the school or the public library. If a student comes across an article in a magazine that cannot be cut for the legal-sized file, he lists the article on a card for the 5- x 8-inch file.

While the student is working on his activity, he may think of original projects; if so, he writes his suggestions and gives them to me. If I think they are suitable, I add them to the file under "Suggestions for Projects."

Developing Critical Reading Ability. Rudisill [30] suggests that the good social studies teacher helps students to understand the author's meaning, judge statements as being facts or opinion, judge the validity of assumptions, examine the adequacy of evidence given in support of opinions, and discover the fallacies in their own hasty conclusions.

To develop critical reading it is first necessary for the student to comprehend the meaning of the passage. To comprehend the meaning of the passage he must understand the multiple meanings of words and the jobs that words do and how they influence people [15]. The use of words to influence attitudes and motivate actions is most clearly seen in advertisements. Students may bring in many examples for analysis.

Then comes the difficult task of criticism. The statement or generalization must be held up for examination— Does it correspond to the known facts and to your experience? Does the statement contain "weasel words" or "chameleon words"? Does the writer employ propaganda devices such as the use of certain words to produce certain feeling tones, omission of some facts to create inaccurate impressions, use of repetition to hammer in an idea? Comparing headlines on the same news items from different newspapers will show how the meaning of a sentence can be changed by a skillful change of wording. For college freshmen Altick's *Preface to Critical Reading* [1] provides illustrations and many exercises which give students practice in recognizing denotations and connotations of words, clues to the author's intent, faulty reasoning, emotional overtones, and tricks of the trade in reporting the news. "Critical reading is creative reading and needs creative teaching" [13].

Lorge [23] gives the example of a passage about the beginnings of ready-to-wear clothing. In relation to such a passage a number of questions can be proposed to promote thinking and evaluating: What was the value of what was done? Why did this event take place? What problems did the situation present? What had created them? What do you think should happen next? What would be the consequences of the action taken? What consequences do you see today in our own society? What likenesses or differences today make this event likely or unlikely to recur?

Why did the author write this? What was his background for writing it? Was he accurate, fair? Did he omit important facts? Where is the fallacy in his reasoning? What line of logic was the author following? Were his conclusions warranted by the facts he presented? What else would you have to know to judge the author fairly? How did the author organize his material to make his argument particularly effective?

How does this passage help you in your understanding of processes, people, values? By what set of standards or values were these people operating? How are our standards or values different or similar today? What was your own bias before you read this? What shifts in your position have you had to make because of what you have read?

Lorge's definition of thinking is challenging to the teacher of the social studies [23, p. 175]. "Thinking is an active process. It seeks and searches. It organizes and generalizes. It collects and solves. Thinking does not always produce a set answer. It is not memory, although it uses what is remembered; it is not generalization, but the process of arriving at generalization. Thinking is basically an attitude of suspended judgment about the problems all of us face."

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CHAPTER 7

Improvement of Reading
in Mathematics and Science

> The spiders build their highways
> In spite of wind and rain,
> As often find them battered down
> And build them up again.
> ANON.

This verse will never crowd the required reading list in a literature class for it was written by Anon., an author who wrote too much to be consistently high in literary quality. But it does contain a homely reminder to us in the reading field that the reading skills of students must be kept in constant repair if they are to be maintained at all. It is a reminder to those of us in mathematics and science that there can be no highway to learning in these particular areas unless we are willing to join the repair crew.

THE READING OF MATHEMATICS

Difficulties with Terms. The reading of mathematics requires an understanding of quite an assortment of technical terms, which present three major difficulties. For one thing, the same term is not always used to mean a particular operation. Expressions such as *and, added to,* and *plus* are used interchangeably. In addition to this, there are several technical terms in mathematics which have their uses in general conversation with quite a different meaning. Bond illustrated this point with the words *square* and *mean* [4, p. 186]. The third difficulty is that mathematics requires the

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understanding of many terms which remind the student of absolutely noth-
ing and must be learned the long, hard way.

A number of investigators have attempted to list and classify the terms
which cause a student trouble. In arithmetic, for instance, Horn [12, p.
14] mentioned the following terms as a few of many persistently needed
by the reader: *amount, area, average, center, circle, depth, difference,
distance, equal, height, increase, length, line, number, part, per cent, pro-
portion, quantity, scale, single, square, straight, time, total, vertical, weight,
whole,* and *width.* Cole [7] classifies the technical terms of arithmetic in
the following categories: nomenclature (*amount*), fundamental processes
(*plus, borrow*), fractions (*cancel, invert*), units of measure (*ounce, yard*),
abbreviations (*lb, sq*), practical measurement (*capacity, space, volume*),
words used in problems concerning retail buying (*apiece, bill*), and signs
and symbols (*@, $, ¢*). She presents a list of essential mathematical terms
in her book, *The Teacher's Handbook of Technical Vocabulary.*

Beyond this verbal language is the mathematical language itself. Leary
[14, p. 151] described it as consisting of alphabetical symbols or literal
numbers, operational symbols, directed numbers, and methods of showing
relationship—formula, equation, table of values, and graph. Thus, the
student not only has to recognize several different terms for the same
process, terms that have their counterpart in the general vocabulary with
different application and terms that have had no meaning for him, but
he must also learn to interpret this new foreign language into still another
foreign language, the language of mathematics. No wonder it is said that a
person can make a fool of himself faster and more certainly in mathematics
than in any other subject.

How to Meet Difficulties with Terms. A number of suggestions are
given in the literature for meeting these difficulties: The instructor should
examine his textbook to determine the words that are going to cause
difficulty. He should confine his own technical vocabulary to these terms
as much as possible so that the student does not have to translate the in-
structor as well as the textbooks. From the list of difficult words the in-
structor makes a pretest, a test to be taken at the beginning of the course
to identify the terms which are foreign to the student.

The form of the test depends partly upon the amount of energy and
thought the instructor wishes to devote to it. He can simply list the terms
and ask for definitions in the student's own words. This is easiest for the
instructor but most difficult for the student. In fact, some students who
know how to use the term mathematically may be at a loss for the proper
words, not to speak of their spelling, in trying to define it. Therefore, the
test will be probably more revealing of the true condition of the student's
knowledge if it contains a multiple choice of answers for each term ["A
denominator is a (1) ———, (2) ———, (3) ———, (4) ———"],

or if it requires the student to use his knowledge of the meaning ["*a* plus *b* is written (1) *ab*, (2) *a* — *b*, (3) *a/b*, (4) *a* + *b*"].

The instructor then makes a chart of the results of the test, the names of the students down the left side of the page and the numbers of the items across the top. After he has recorded by check marks the failure of a student on the different items, he can look down the columns to see which items are unknown to the whole class, which to groups, and which to individuals only.

On the basis of these results the instructor can make his initial presentations in the class. For instance, he can return the papers to the class to make each individual aware of his needs. He can give the whole class exercise on those terms strange to all, group exercises to groups needing a particular kind of help, and some individual instruction. He can have students who know help students who do not. (See Chapter 9 on "Tutorial Grouping.") He can have individuals who know take charge of exercise at the chalkboard with small groups who need it. Students can look up definitions of a given term in various sources and compare findings [6]. They can make charts of their knowledge, have notebook records, and impress the knowledge upon themselves in other ways. These activities refer to terms which are basic to the course and which should have been learned before. Terms that will be required at a later time in the course may better be left to explanation and practice at that time.

Furthermore, during the course the students must be made aware of interchangeable terms. "How many ways have we of saying 'plus'?" "Write the following expressions in another way: *a* plus *b*, 4 added to 5, *x* and *y*, etc." Some instructors use a few minutes of every class period for a short test of terms. The test does not involve the actual solution of a problem but merely the rewriting of an expression to show comprehension of the meaning of the term, as in the example above. With older students a different committee each day can be responsible for planning such a test.

Leary [14, p. 159] mentioned a classification test in algebra, using a chart like this: "Check in the appropriate column whether the expression given is numerical, literal, binomial, trinomial, or polynomial."

Expression	Numerical	Literal	Binomial	Trinomial	Polynomial
1. $a + b$			$\checkmark$		
2. $x^2 + 2x + 1$				$\checkmark$	

A good basic practice is to start any new learning with something which is a reality in the students' own living or with an experiment which illustrates the importance or nature of the learning. John [13] suggested, for instance, that directed numbers be introduced with a practical application like earning and spending and temperatures above and below zero.

She urged that students need to see and use these concepts in a wide variety of situations. She suggested in the treatment of the terms *tangent* and *secant* that we use the example of the farthest point an aviator can see on the earth from his position above it. Henderson [11, p. 160] proposed that we have students discover the meaning of *sine* and *cosine* by having them construct many different-sized triangles with one right angle and two acute angles of constant size. By computing the sine and cosine for each of these triangles they find that, except for minor errors of measurement, the values are the same.

Visual aids are important for giving reality to problems. John [13] cited Woodring and Sanford's *Enriched Teaching of Mathematics in the Junior and Senior High School* [28] and *A Source Book of Mathematical Applications,* Seventeenth Yearbook of the National Council of Teachers of Mathematics [20] as excellent sources of material. These older sources have been supplemented on state and local levels, and we must not forget the educational films currently available in this field.

Several writers feel that the true concept of the formula is completely missed by many students. The latter think of $d = rt$ as "distance equals rate times time," instead of as an expression of the relationship, the interdependence, of these three factors. The authors urge that we devote some time to consideration of what happens to this relationship when one of the factors is held constant, e.g., when d is held constant, r varies with the value of t. Experimentation with the assignment of various values and the solution of the problems thus formed will impress the nature of the relationship upon the students.

It is very important that students hear and use the terms which they are learning. Technical terms should be repeated and students encouraged to use instead of avoid them. One assistance in this is for the instructor to present the word orally with his face *toward* the class and to have the class repeat it in unison; then he should write it on the chalkboard as he says it slowly and have the students repeat it again. In this way no one has reason to avoid the use of the term because of timidity about correct pronunciation.

Beyond this the instructor should test and check upon learnings at frequent intervals so that students are reminded of the terms they supposedly know. Nothing rusts so fast as a useless label.

Difficulties with Comprehension and Speed. So far we have discussed the learning of terms, which is basic to our next topic, comprehension and speed of reading in mathematics. Axelrod [1] pointed out that the reading of mathematical problems requires deliberation. It cannot be done at a gallop. Students who customarily read as though they were on a race track are doomed to failure in this field even before they open a book. They need to be identified and slowed down. Each student needs to take inventory of his reading rates and consciously adjust his speed to the

requirements of his task. In mathematics the snail could teach him a lesson.

Bond [4, p. 186] stated that context clues are of little value in the reading of mathematics problems. Sentences are stripped to the minimum number of words, so that there is little to suggest the meaning of a particular term in a sentence. And probably most of the words are such a difficult job of translation for the student that he cannot rise above them far enough to recognize such clues as there are.

Bond also described the kinds of reading that are necessary in mathematics: noting details, weighing details, following directions, organizing factual contents, drawing inferences from them, and discriminating between the relevant and irrelevant. Luckily the last point is not too frequently a problem in the usual textbook; though in the use of mathematics in life situations there is plenty of chaff to separate from the wheat. Sometimes, too, a student in reading a problem gives mental emphasis to the wrong word and confuses the meaning.

How to Meet Difficulties of Comprehension and Speed. One way to make a student notice the details carefully in a problem in geometry is to have him draw the conditions described. A temperate amount of this kind of activity should help the student get a clear idea. Furthermore, the picture quickly gives the instructor the evidence about misconceptions before they have gone too far.

In making an assignment, it is wise for us to state exactly what we expect the students to be able to do [11, p. 162]. We should also say how we think it can be done. Sometimes we can get suggestions from the students who have been successful in this particular type of assignment. The author of this chapter is sorry to say that she remembers most vividly a time of torture in her mathematics career when she listened day after day without comprehension to an earnest, hard-working teacher as he explained how to do the next lesson. Ultimately she became gravely patient and simply waited for night to fall. At home, later, she would look at the example in the textbook until she could figure out what was going on. She never knew *why* it was going on, but she came through each day, somehow, with the assignment. This experience was not unique, and still many of us do too much explaining without looking back to see who is following us, without asking questions, and without getting the abler students to put it into their own words—words that sometimes make meaning more clear than ours do.

Students need to learn to read with a purpose. It is questionable whether any successful student of mathematics ever solves any but the simplest of verbal problems correctly in one reading. In his first reading he notes the kind of situation involved and the technique applicable to it, the identity of the unknown, and the facts pertinent to the solution. This reading is more rapid than succeeding readings but much slower than the usual pace for a popular novel. A second reading probably centers attention separately

upon pertinent words and groups of words, their meanings and their translation into mathematical symbols. Some students interline their problems with symbols ($\times$, $+$, etc.) written above the words representing these ideas. The third reading can focus upon the relationships among these words and groups and arrive at a determination of the statement of equality. A fourth reading serves as a check upon interpretation and is punctuated with periodic reference to the symbols assigned to the words and groups.

In geometry perhaps the first reading is a general one in which the hypothesis and the conclusion are grasped. A second reading of the hypothesis gives the details of the figure to be drawn. After the reader has drawn and lettered his figure, a third reading with attention to the conclusion helps him to set up the symbolic statement that he must prove and to decide whether construction lines need to be added to his figure. Another reading with reference to his figure and his statement checks upon his interpretation. The proof of the statement involves the recall of previously learned theorems and axioms in response to the conditions of the problem. This is translation in reverse, from the pictorial or symbolic to the verbal.

Bond [4, p. 188] suggested that the reader read rapidly for general impression in an arithmetic or algebra problem, that he then read to put the facts into proper relationship with one another, and then read to check the organization of relationships. The student is to ask himself the following questions: "What facts are stated? What question is asked? What arithmetic operation must be used in the first step of the problem? What steps are needed for the solution? What should the answer be approximately?"

Henderson [11, p. 163] made the following suggestions for the reading of formulas, tables, and graphs: Find the subject or title. Ascertain the variables, the meanings of the variables, and what their units of measure are. Find out how the variables are related. In tables or graphs read pairs of related values.

Creative activity helps a student remember both terms and relationships. If a student has made his own graph, such as the day-by-day increase in orders for the school yearbook in high school or college, he can interpret graphs better. If he has tried his hand at original problems, even though his hen turns out to have laid half an egg, he understands relationships better. In the drawing of pictures, the construction of models, and the making of tables he becomes more a mathematician and less a mere manipulator of figures.

Directives for Developing Reading Skills. When we pay attention to reading skills, we are actually teaching our subject better. Spache and Berg's *The Art of Efficient Reading* [25, pp. 212–220] gives examples of exercises in reading arithmetic material. The following are examples of directives to students that may be used in class activity and in the making

of the assignment. They are organized for the kind of skill that they foster. These different kinds of activity should happen frequently rather than in a concentrated block of time.

Reading for the Main Idea. First general reading of a verbal problem:

Read the verbal problem to see in general what kind of problem it is. Express the situation in a general way, such as, "With time and rate given, the distance is to be found."

Go carefully through a verbal problem picking out the general words which suggest the character of the problem (time, rate, distance, inverse proportion). Translate other words into these terms (that is, translate minutes or hours into time).

Read the problem to find the unknown.

Find the author's statement of the problem involved in a given example or problem or chapter.

State in your own words the problem an example or a chapter deals with.

Reading for Sequence or Outline. Steps in an experiment or problem:

Using the example of a mathematical process, make two columns on a sheet of paper; list in one column the steps required for solution in your own words and in order; in the second column translate these steps into mathematical symbols. Placing a sheet of paper next to these lists of steps and symbols, work a problem of the same kind step by step according to your description in the lists.

Conversion of words into symbols, phrases into symbols:

Underline the words or phrases in a problem that are to be converted into mathematical or scientific notation. Over each of these write the symbol that represents it.

Write the appropriate symbol after each of the expressions in a problem whose symbols you know. If there is a symbol that you do not know, look back into previous problems or examples to see whether the expression has occurred before.

Note the symbol used on this previous occasion. Put this expression and its symbol in your vocabulary notebook for special attention.

Drawing a figure:

Read carefully the description of the figure noting the objects that are to be in it. Write the names of these objects, and draw the symbols for them next to their names.

Next, study carefully the relationships among the figures—where one thing is in relation to another and what the relative sizes are. Indicate these relationships lightly on the symbols or briefly in words.

Next, draw the complete figure referring constantly to these notes. (If a student's drawings are already acceptable, most of these steps may be performed mentally.)

Formulas:

A formula is most meaningful if its derivation is clearly understood.

Read through the explanation of the derivation of the formula. See whether you can follow the reasoning that leads to its final form.

Read the verbal description of the formula and see that this is understandable

to you, referring to the dictionary if necessary. Compare the verbal description with the formula to see how the different concepts are represented.

Note the examples and read the text to find out for what kind of situation the formula is appropriate.

Work a problem through to experience the effectiveness of the formula.

Notice what precautions must be taken in the use of the formula, especially the relationships or proportions that must be maintained among the factors.

Reading Creatively: Inferring, Drawing Conclusions, Seeing Relationships. Statement of equality, relationship of parts of a problem:

Read the mathematics problem to note the statement of equality, i.e., what group of elements is equal to what other group of elements under what conditions. Notice what alterations in one set of elements or another are required for a status of equality, i.e.,

$$x \qquad - \quad 10 \quad = \quad 2 \qquad (2 \times 12)$$
(a certain number) minus 10 (is equal to) twice (the product of 2 and 12)

Such alterations are suggested by terms like decreased by, diminished by, reduced by, increased by, is greater by, etc.

Read a problem of the type for which there is a standard formula such as $d = rt$. In the sentences that comprise the problem, find the elements to represent d, r, and t, and substitute them in the formula.

If two situations are compared in such a problem, note the conditions of comparison. For instance, the distance train X travels is twice the distance of train Y. Train X goes 70 miles per hour. How far could train Y go in an hour? The first sentence gives the basis for comparison: $d' = 2d''$. If this is true, then $r't' = 2r''t''$. The second sentence requires this second formula because the comparison is shifted from distance to rate and time: $70 \times 1 = 2(r'' \times 1)$. The equation becomes a comparison of two situations for which the condition of equality was set ($d' = 2d''$).

Vocabulary. Symbols and formulas:

Certain letters and odd marks stand for certain things in mathematics and science. The letter t, for example, often means "time," and v means "velocity." In order to think well in mathematics and science, you must work with the symbols and read meaning back into the results.

When you come to a symbol in the text, note the definition that is given for it. If no definition is directly given, reread the preceding sentences to determine what it must stand for. Write the symbol on one side of a card and the definition on the other. Looking up from the text, try to repeat the symbol and its meaning. Write down the symbol and its meaning in a notebook or on a card.

When you come to a formula that is important to remember, underline it. Write it and its meaning and use in a notebook. Write the formula on one side of a card and its meaning on the other. Looking up from the text try to repeat the formula and its meaning. Tell what it is used for and give it a name: "formula for _____."

The Reading of Illustrations.

Labeled figures:

Read what the text itself has to say about the figure.

Read the caption of the illustration. Think what it means in relation to what you have been reading. Say it in your own words.

Look at the figure, keeping the legend in mind. Notice the items that the legend suggests are important.

If the figure is especially important for you to remember, read the labels and notice the parts carefully. Close your eyes and try to visualize the figure and name over the parts.

Jot down the labels and try to describe these parts or draw them.

Compare with the original.

Try to draw the whole figure from memory.

Charts or graphs:

Read the legend and try to put it into your own words.

Notice any key to meaning, such as the labels of parts.

Pick out a given point on one axis (margin) of the chart and find the point on the other axis that indicates the location of the line.

State in your own words the meaning of this point on the line.

Practice reading the chart in this way.

If the textbook mentions a given point or feature of the chart, locate it.

Tables:

Read the legend and put it into your own words.

Read what the text has to say about the table.

Look at the headings of each column and each row across the top and down the lefthand margin.

Pick out a number in the table and interpret it according to its placement in column and row.

Looking over the table and comparing the numbers in the rows and columns, make a general statement as to any tendency to large or small amounts in a given category.

Aids in Reading Difficult Texts. Many of the textbooks we have in mathematics are hard for our good readers and impossible for our poor readers. The following practices are designed to compensate somewhat for the difficulty of a mathematics text:

1. Help students to become familiar with mathematical concepts through having them read comparable lessons in an easier text first, and using the approaches of an easier text in preparatory lessons. Better students may write a verbal problem in their own words, using shorter sentences instead of one long, involved sentence. Hectograph these simplified versions for all students to read.

2. Help students understand the nature of a problem by having individuals invent verbal problems that reflect a common life problem. Nonessential facts may be inserted in problems of a known type to give the class practice in finding the essentials for solution. A comparison of similar problems differently worded will show that different words may have the same meaning.

3. Aid students in reading the problems in their regular texts by encouraging the prereading of lessons, with questions at points of difficulty, and by having a student committee look ahead for trouble spots and clarify the difficulty.

Students for whom a difficulty has been clarified may explain it later to the class. The teacher may eliminate or change verbal problems whose wording presents an ambiguity.

4. Give effective instruction by having better students tell how they have unraveled a puzzling problem and illustrate their successful methods.

5. Help students build a mathematical vocabulary by having them write in their notebooks a list of new words and words that have caused difficulty, illustrating each, if possible, and using them in phrases or sentences. The teacher may use the first few minutes of each class for pantomimes, quiz programs, or other ways of visualizing the meanings of certain words or for having students show their best illustrations and definitions of new or troublesome words and file them as a help for future classes.

THE READING OF SCIENCE

Difficulties with Terms. Inherent in the reading of science are several types of difficulty [17]. There are terms that are strange and necessary and symbols and abbreviations. As though not satisfied with its own natural hazards, science borrows trouble from the field of mathematics. Leary [14, p. 165] illustrated this point with a sampling of words used in physics, chemistry, general science, and biology: *cost, minus, distance, compute, twice, product; formula, algebra, equation, permutations* and *combinations; diameter, arc, sector, circumference, radius, alignment,* and *conical.* Obviously, as in the case of mathematics, a pretest to determine the students' familiarity with these terms is indicated.

Leary suspects that some of the difficulty in terminology is unnecessary. "There is nothing really gained by calling a shoulder blade a scapula, a leafstalk a petiole, or a weatherman a meteorologist" [14, p. 163]. It would not be surprising to hear loud denials of this statement in some quarters, but there is soundness in the criticism. Many students who will never become doctors or scientists will get more sense out of what they read if the terms reserved for specialists are removed in favor of "everyday American." Yes, the future doctors and scientists in the class should have access to books that provide the technical terms and they should have many an enlightening duet with us, the instructors, on matters which *hoi polloi* cannot comprehend; but the diet of 90 per cent of the students should not be determined by the appetites of the 10 per cent. It is a question of whether we want our courses to mean *anything* to *most* students—whether, indeed, we should offer them as general or required courses in public education.

Another problem in learning the terminology of science is that many of the courses which most students take at all educational levels are general in nature. In the elementary school, in the junior high school, and in beginning college courses students are taken on a Cook's tour of the

world of science. Such general courses use relatively few of the same technical words throughout a semester or year. We remember what we continue to use or what we have met with considerable emotion. Since many a general course in science cannot offer continued use of technical terms, any hope of having students remember seems to depend upon their having an impressive experience.

In addition to this hazard we have the fact that science uses in a different and technical sense some of the common words we know. Thus *force* and *culture* [4, pp. 189–194], for instance, are not to be mistaken for the same terms in social studies.

Another problem is that of motivation and making the meanings vivid. Actually, when science is not laid out as an accomplished course, it is naturally interesting. But there are aspects of it that are difficult to make real to students because of their remoteness from student experience or because, though they control our lives, they do not show on the surface. The task is to make the subject as alive and stimulating to the student as it is to its professional explorers.

How to Meet Difficulties with Terms. What are some of the ways in which instructors can meet these difficulties in terminology? One teacher who really loved science used to go several hundred miles away over the weekends to see migrations of birds; then he would come back to tell his classes. William Beebe had written a new book at that time from which the teacher read portions. He made the pupils interested because he was interested. The subject was alive because he was living it. There is no substitute for the teacher who really cares about his subject, whose interest is still active, and who wants to share that interest with his students.

As in the mathematics field, the instructor is wise to construct a pretest based upon the difficult terms which the student will encounter. As each topic is approached in the course, the instructor will take special care with those concepts which were not known according to his pretest or to his informal questioning at the time. One of the means of making the concept real at this point is the observation of the subject itself (the presence of the fish, field trips, experimentation); but we should not ignore the value of an educational film.

Educational films in science are especially well done and are useful particularly in introducing a topic or in studying this topic later on in the student's experience with it. In both cases the important consideration is that the observation have purpose—that the student be told beforehand what to look for. The film can be rerun and stopped at points for discussion. Filmstrips offer many of these same advantages. Sometimes an idea that is extremely difficult to grasp verbally can be realistically presented in pictorial form after students have developed certain objectives for their observation, such as, "What is its method of locomotion?"

"What is its relative size?" "What food does it eat?" "How does it eat?" By the time all such questions have been discussed, the instructor has taught his subject as well as the concept.

Students can be encouraged to use their environment to build their understanding of concepts. Television programs and movies are frequently science-centered (television's *Science in Action* and the movie version of Rachel Carson's *The Sea around Us,* for instance). Science magazines and science articles in popular magazines and newspapers add facets to meanings developed in the science classroom [22]. A bulletin-board display of clippings and news of programs and movies keeps this interest alive.

Siemons reminds us that "each time they watch a cloud, examine an insect, or push a doorbell," students are having a science experience [23, p. 97]. Educational TV programs in science and current news of scientific developments, such as the exploration of outer space, may lend vividness to book-developed concepts. The growing edge of scientific knowledge, represented in the imaginative conjectures in science fiction, can keep students thinking in and with the field, aware that it is alive, not dead. Easier materials for poor readers in a science class are listed in an article by Mallinson [16].

To assure some retention of terms in a general course, the instructor will have to provide more repetition for the term. This can be done through having student experiments and reports, student-originated quizzes, frequent reference to past learnings in introducing the new (comparing and contrasting, showing relationship, if any), and having students use the term in oral and written form (reports, notebooks, diagrams, etc.) as often as possible. Science clubs often can continue experimentation and discussion on a topic which must be left behind in a general course. Stress upon relationships of old and new concepts, even to the point of having family trees developing on a side wall of the classroom, makes it easier for a student to remember the individuals on that tree.

Several writers in this field feel that concepts need to be introduced slowly to permeate. In view of this an instructor can have a specimen in the classroom for several days before he introduces a new topic. He will deliberately provide snooping time for the students to observe this creature and ask questions about it. He may even refer to it if it has any connection with his current topic. Then when the day for the new topic arrives, the students will be ready with some firsthand knowledge.

The use of reference tools is important in the reading of science [27]. Students need to know not only the usual general references in a library but also those which deal exclusively with science topics. In a general dictionary they need to learn to look for the symbol *sci.* which designates the scientific meaning of a word which has several meanings. They can make a glossary of the scientific words they know, even though it is only

a notebook with pages devoted to letters of the alphabet. In it they can indicate the pronunciation of the word and use it in a sentence or illustrate it to show its meaning. They may also record the Latin or Greek derivation of the word, which gives clues to its meaning. They may be trained to find these roots in the dictionary.

The suggestions given to students for mastering the technical words in other fields may be applied also in this special field of science.

Methods of Vitalizing Science Teaching. In order to make science real and motivating, the authors of the Forty-sixth Yearbook of the National Society for the Study of Education, *Science Education in American Schools,* suggest that we need to teach scientifically, not have the students "recite back" [21, p. 193]. For instance, students in the study of geology should have the experience of identifying rocks. Identification is relatively meaningless, the authors claim, if *we* do it; it must rather be the product and the achievement of the students themselves. Thus the experience of discovery gives vitality to the fact.

Problem-solving methods should be used. Sometimes the textbooks start chapters with problems and thus establish a need and curiosity. Questions such as "Why do we breathe?" start a discussion which reveals to the students the basic inadequacy of their own knowledge and sets a purpose for their reading. Awareness of community needs (sanitation, etc.) makes science seem as useful and timely as it really is [9]. Health education consists largely of practical problems pupils can solve.

Another method of putting the breath of life into a science course is not just to see a paramecium in a picture, in a verbal description, or on a family tree but to take care of a real one. Reports and readings on the lives of scientists and how they conducted their original experiments and made their original discoveries lend human interest.

In the early grades Burgess [5] proposed these types of question to purpose the reading: What question is raised by the book? What kinds of facts do we need to answer our question? Where shall we get our information? Pupils are given an understanding of the concept of experimentation by going through actual experiments.

It should probably be pointed out here that there are ways and ways of "going through an experiment." There is the way of following the directions in the book and coming out with a white wavy line that suits the teacher or laboratory assistant. Or there is the way of wondering about something, deciding what steps might be taken to find out, taking those steps to find out, finding out, and finally, knowing not only what the answer means and how it can be applied but something of the scientific method.

Lindsay [15] pointed out that consideration of student characteristics helps us plan effective approaches to learning. Since pupils in grades 7 to 9 typically enjoy responsibility, group activities, and the making of

collections, they respond well to group experiments, the collecting of specimens, the keeping of notebooks, and the responsibility for the care of certain displays, experiments, or animals.

Bond [4, p. 191] warned that "Read the next ten pages," does not give students experience in locating information within a textbook let alone in a library. Library work is important for finding out about concepts and extending student experience with them. One major difficulty is that many students meet these concepts in only one book, their textbook; and perhaps for one brief chapter. Assignments to read about them in other books, or opportunities to do so, mean more of a chance to understand and remember. Leary [14, p. 168] made the point that probably we attempt to cover too much and could be more effective if we covered less ground more carefully. Thus, extensive reading on one topic would be possible before we progressed to the next.

Difficulties with Comprehension and Speed. Parroting out of the book is the safe practice of the uncomprehending student. He can write a difficult statement on the examination; he can recite it in class; but he will be fifty before he fathoms its meaning. Bond [3] urged that we require interpretation rather than memorization. Otherwise, as he says, "One farad (will still be) the capacitance of a conductor into which a coulomb of electricity may be put with a potential difference of one volt" [3, p. 105].

Maney [18] found that verbal intelligence is intimately related to ability to read in science materials, and that the ability to read critically in science seems to be independent of ability to read literally in that field or of general reading ability. Thus, we cannot expect students to fare equally in their attempts to read critically in science materials, and we can expect to have to guide the activity in the case of most or all readers.

Science textbooks contain some materials that are written with almost the conciseness of mathematics. There are statements of laws, definitions, formulas, lists of the characteristics of various groups, and lists of the names of members of various groups. Besides these, however, there are passages that are more descriptive and expanded and that have to do with steps to be taken in an experiment; with steps in the life story of a plant or animal; or with processes that have produced inanimate forms, such as the conglomerate rock. The most modern texts, as well as the old, often present facts on the basis of which the student must make his own generalizations and inferences. Sometimes the life and works of a famous scientist are developed much as one would find them in literary biography. Most science books are amply illustrated with diagrams or labeled drawings of certain forms or processes or with pictures of stages in a life cycle or an experiment. Many textbooks suggests practical problems and experiments which apply the knowledge pupils have gained from reading.

So the science textbook makes a variety of demands upon its reader. The student has to be prepared to vary his speed and method of reading

and the purposes for which he is reading when he turns to different kinds
of material. Furthermore, he must learn to recognize these types of ma-
terial as he comes to them. He must sense that this is the biography of
a great scientist and that the purpose of its being presented is probably
to illustrate the arduous task of the pioneer, to demonstrate the scientific
method, to make more memorable the scientific findings. Or he must realize
that this is a definition of a term that will recur and will cause him con-
siderable trouble unless he becomes well acquainted with it; that this is a
presentation of a life cycle, the steps of which he must remember in se-
quence; that this is the recounting of an experiment whose premises and
steps are important; that this is the statement of a law whose verbal descrip-
tion will be more memorable if he studies the diagram or series of pictures
illustrating it also; or that, because this topic has been allotted several pages
by the author, it is probably something particularly important to remem-
ber. McCallister [19, p. 132] gave some idea of the scope of the reader's
job when he described the types of thinking required in science. "All these
types of thinking," he wrote, "occur simultaneously with fact-getting and
are facets of the reading process."

How to Meet Difficulties with Comprehension and Speed. Ideally, in
the use of science material the student does more than memorize the ma-
terial on the page, more than sense the sequence of ideas and remember
them in order. As he reads, he makes comparisons of one set of materials
with another. While reading about the life cycle of one creature, he com-
pares it mentally with a previously read life cycle of another to see the
likeness and differences of the two. If the teacher is prone to ask such ques-
tions as "What are the chief differences between vertebrates and inverte-
brates?" the student must be aware that it will be helpful to his preparation
to make a mental comparison of vertebrates with invertebrates as he reads
of one of these groups. Thus the purpose for which a student reads science
material is conditioned not only by the nature of the material as he finds it
but also by the types of thinking about the subject that the teacher is accus-
tomed to require. Most of this reading is of the slow, thoughtful, careful
type. We should have students discuss how they read for these different
purposes.

Strang [26, p. 78] described the steps through which a scientist goes in
developing a theory as being a matter of observing facts: holding facts in
mind, noting the relationships among facts, noting whether they and their
relationships support a theory, and adding other facts until the theory is
fully supported by copious evidence. The student reading the account of
his theory or experiment has to purpose his reading with questions like the
following: What is the theory? Why is it so? What are the limits of its
application? What can we expect in such and such a situation because of it?
The teacher who wants to make sure that the student reads in this way may
suggest these questions in making the assignment.

Directives for Developing Reading Skills. The following are a few examples of directives to students that may be used in science class activity and in the making of the assignment. Similar suggestions that have been given for reading in English and mathematics classes may be adapted to science teaching. These different kinds of activity should happen repeatedly rather than in a concentrated block of time.

Reading for the Main Idea. Express the purpose of an experiment in one or two compact sentences: "The test is to determine the relative speed with which water will pass through sand, clay, and loam."

Express the finding of an experiment in one sentence: "Water passes most easily through sand, then loam, then clay."

Express the utility of this finding in one sentence: "Plants requiring rapid drainage should not be confined in a bed of clay unless an outlet is provided."

Find the author's statement of the purpose of an experiment.

Find the main idea in a number of different kinds of paragraphs.

Write a paragraph giving the main idea. Give the paragraph to another person who must find the main idea.

Reading for Sequence or Outline. Note the purpose of the experiment, and as you read, anticipate what will be done; see how the steps are related to the purpose.

Note the steps you must take to carry out an experiment. Translate the author's words carefully into your own in a list of the things to be done. Read the list you have made to see why each step is necessary, noting especially the order in which the steps occur.

List the chain of events leading to a scientific discovery (steps by which Marie and Pierre Curie isolated radium; steps by which a series of scientists discovered the factors governing falling bodies).

Number the steps in the life cycle of an insect or animal. Try to see the relationship of one step to another, and if a title to each of these stages is not given, write in the margin a title for each (egg, larva, pupa, etc.). Underline or write the important characteristics of each stage. Close the book and try to enumerate the stages; open the book and compare; repeat if necessary.

Reading for Details. In scientific definitions and laws notice the qualifying words: the descriptive words, the phrases that narrow the application of the law or the scope of the thing defined. Read the definition carefully for the general meaning. Look up any words that trouble you. Put the definition into your own words.

Read additional material which tells what the thing referred to does (what its function is), what it is good or bad for. Make some special note of the definition, underlining it, writing the word and its definition in the margin, putting the word with a statement of its characteristics and its functions into a vocabulary notebook.

Read through the explanation of the derivation of the formula. See whether you can follow the reasoning that leads to its final form. Note the examples and read the text to find out to what kind of situation the formula is appropriate. Work a problem through, to experience the effectiveness of the formula. Notice what precautions must be taken in the use of the formula.

In reading an experiment, notice the kinds of words that suggest the intro-duction of a new step: "Then, to this, add _____," etc.

Number the steps as they are given.

Underline or write down the important words of each step. Reread each step underlined and try to visualize it or draw a diagram of it. Try to see the rela-tionships of each step to the next and of each to the purpose of the experiment. Ask yourself, "Why do we do this?" and "Why does this step come here in-stead of sooner or later?"

Close the book and try to enumerate the steps and their details; open the book and compare.

In reading about the life of a scientist, be sure you know the time he lived, his country, the field to which he contributed. Try to recall in what connection you have ever heard of him. Note the words (*then, his chief contribution,* etc.) or the forms (new paragraph) that introduce new steps in his life. Underline or write the important events in his life. Number them. In the margin give a name to each discovery or event.

Note the methods that he used in his studies if those methods are important. For each discovery notice what the author has to say about its value or signifi-cance to scientific thought and to our lives. Try to think of ways in which each of this scientist's discoveries has affected your thinking or your life.

Close the book and enumerate the events or discoveries and give the im-portant details of each; open the book and compare.

In material that has too many facts for you possibly to remember, decide how many things you can remember. Notice the ways in which the author indicates, if he does, the relative importance of these facts:

By giving more space to the discussion of one fact than to another

By the use of introductory remarks, such as *above all, preeminent, the chief factor, probably the most crucial*

By organization, such as paragraphs in which a big fact is illustrated or supported by a lot of little facts; marginal headings to point out the big facts

By questions at the beginning or end of the chapter to call attention to the most important facts

By a list of important words at the end of the chapter

By a summary at the end of the chapter or section

By the use of italics

By pictures or other illustrative material

Otherwise, note by yourself the relationships among the facts and choose the key facts among these. Compare the facts in the text with the kind the teacher usually requires in his questions in class, in his tests, in his assignments.

Reading Creatively: Inferring, Drawing Conclusions, Seeing Relationships. Compare an experience you have had with a principle or object discussed in your science text.

Decide what the results of this experiment mean to the farmer, to conserva-tion, to industry, or whatever other area of life it may affect. Does it change the things people do, the way people do things, the ideas people have about a cer-tain thing?

From the description of a bird, for instance, decide what its eating habits, etc., must be.

Given a diet of certain foods, list the content of these foods and note the deficiencies or excesses, if any. Decide what effect this diet would have on an individual in health, energy.

As you read about one kind of animal, plant, or inanimate object, think of another like it that you know from your reading or experiences. How are they alike? How are they different?

Spache and Berg's *The Art of Efficient Reading* [25, pp. 184–99] gives examples of exercise in reading science material. Spache [24, p. 162] warns that "repeated practice in answering a stereotyped sequence of questions . . . may stifle the creative, interpretive reading with which each new reading should be approached."

CONCLUDING STATEMENT

Probably one of the best suggestions that could be given mathematics and science instructors on the problem of meeting the reading needs of their students is something William Beebe said a few years ago in reply to a compliment on his writing. He said he was not conscious of having any particular style, but that he did have a method of preparation. If he intended to write about a certain fish, he observed the fish carefully until he seemed to be inside of it. Then he wrote how he felt. The resemblance of students and fish is purely coincidental in this illustration; but if we could observe students and their reading problems so faithfully that we suddenly found ourselves inside the students' skins, we should have the means of developing for them an effective program of learning.

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Improvement of Reading
in Other Subjects

Teachers in subject fields other than English, mathematics, science, and social studies are variously aware of the reading problems in their areas. In fields where little has been done to recognize the problems or to suggest procedures and materials, the teacher is forced to attempt her own analysis and to use the ideas which are applicable from other fields. This chapter contains gleanings from the fields of business education, foreign language, home economics, industrial arts, and music, with implications for still other fields.

BUSINESS EDUCATION

Reading has much to do with success or failure in business courses. The student needs to understand important technical words thoroughly [11, 28, 31, 43, 58], use an appropriate approach to each kind of reading, and learn to get the meaning of difficult passages and put the ideas gained to immediate use [6].

Bookkeeping and Accounting. Musselman [52] attributes difficulties in reading bookkeeping textbooks to several factors. He notes the heavy vocabulary load reported by House [33]; more than 200 technical bookkeeping words having been found in the high school textbooks on the subject. Common words with special meanings in bookkeeping must be untangled from the common meanings associated with these words: *abstract, capital,*

charge, credit, extend, footing, post, prove, register, ruling, statement, terms.
Furthermore, teachers and authors tend to use certain terms interchange-
ably, confusing the student who supposes a different idea is meant with
each change. Here are some of these interchangeably used words:

analysis paper, work-sheet paper, working paper
bad debt, bad account, uncollectable account
cash on hand, cash balance, balance on hand
proprietorship, net worth, capital
minus asset, valuation account, reserve account
principal of note, face of note
profit and loss statement, operating statement, income statement, income and
    expense statement
liabilities, debts, obligations

According to the Flesch Reading Ease Chart, bookkeeping textbooks
rank in difficulty with such magazines as *Harper's, The New Yorker,* and
Business Week. Musselman [52] estimates that they are beyond the reading
ability of over 50 per cent of high school students, and points out that
typical bookkeeping classes range in reading ability from about the lowest
5 per cent of seventh-grade students to the highest 5 per cent of twelfth-
grade students. In House's study of 357 bookkeeping students [33], 40
per cent of them had the ability to read the texts.

Musselman suggests that the teacher associate technical terms with ideas
familiar to the student, the idea of *assets* with the possession of a bicycle,
radio, wrist watch, and clothing; provide experiences such as field trips to
see an office clerk checking the accuracy of calculations on a sales slip to
clarify the conception of the phrase *auditing the sales slip;* dramatize the
action of a corporation determining the amount to pay stockholders from
profits to build meaning into the word *dividend.*

He urges both that the teacher be consistent in use of terminology and
that she prepare lists of terms in the coming assignment, deciding the best
approach for each. The bookkeeping period may better be a period for
explaining the assignment and the terms used and for guided silent reading,
rather than a period for recitation and testing primarily. It is helpful to
students if the teacher looks with them at the illustration in the textbook
and at the reading matter which must be associated with it, and asks them
questions which require "reading" the illustration from the information
given. The use of study guides with the textbook reading instead of as tests
after the reading gives the student a sense of direction and emphasis.

Part of reading success is due to the curiosity or desire which motivates
the student. If the student's self-starter is weak—indeed, if the whole tone
of the class is, "I dare you to unbore me,"—Jasinski [37] suggests the use
of varied and attractive materials (newspapers, magazines, pamphlets,
charts, and tables), student activities which keep the blood circulating
(writing, speaking, seeing, listening, thinking, collecting, investigating),

and the initiation of each topic with practical problems tied to the students' personal experiences. If these suggestions seem time-consuming to the ambitious teacher, she need only remember a recent article which points out ten ways to waste time in business education. There may be room for these additions after all.

Another means of motivating reading is the choice of the textbook itself [7]. The size of type, the organization, the clarity of expression, the presence of helpful illustrations and attractive format are parts of the invitation to read. If the teacher gives the student a specific purpose for reading a selection, suggesting what to look for; a guiding list of questions or a problem to solve by selected points from the material; and if the student is then held to applying what he has found in some specific way—actually solving the problem or using the answers to the questions to apply to another situation—the student is both more efficient and more interested.

As students read an assigned accounting problem, they should be asked to express the idea in their own words [27], tell in detail the instructions for solving the problem, and present a step-by-step procedure for solving it, without the use of figures at all.

When a student has read paragraphs on a new topic and has taken a quiz on the contents, and the papers have been checked by the teacher, the student should restudy the paragraphs to determine what he has missed [27]. The incentives are that the paper will receive a second grade after corrections have been made, and that the student may know better how to find the right answer to that type of question next time. Desirably the instructor should go around the class, having each student tell her individually what his reading problem was, what fooled him, and how he thinks he can fool it next time. The teacher needs to analyze for herself and be ready to guide the student to see why one answer is right and the other answers wrong.

House [33] points out that teachers can create reading problems by the very wording of their test questions. Sometimes a teacher can screen out such problems by having the students read aloud and interpret the questions, sometimes by going over the wording carefully in advance to eliminate unnecessary rare words and ambiguities. A good question to hold in mind is: What kind of hash will Mortimer make of this?

It is not essential that all of what transpires in the business class be held to the Mortimer level. Wagoner [70] proposes that the bookkeeping textbook be used as a reference book. If this is done, students may be using as reference different textbooks on the same subject. A teacher can administer a test on short selections from the different textbooks at the beginning of the course to find which textbooks are understandable to which students. Or she may simply look up the students' reading records and compare their tested reading abilities with the textbook levels. Then abler students may be assigned the more difficult textbooks, and the whole class

may be retaught the use of the index and table of contents to find information.

Business Law. Goodman [23] has listed 211 words which are basic technical vocabulary in business-law textbooks. Sometimes the textbook lists the new terms at the ends of the chapters. In this case, the teacher can draw attention to them before the chapter is read. Otherwise, she offers her own list or sends a representative student road crew ahead to scout troublesome words. Brophy [6] encourages students to look up words in the dictionary for the business-law meaning, to read the words in the textbook context, and to write their own definitions of the words as used. Then he polls the class for different versions of meaning to arrive at a class definition. Correct pronunciation is stressed, all students pronouncing the word carefully. The students then record the terms in individual notebooks, indicating syllabication and pronunciation symbols as well as definition. Each word should somehow be attached to the type of context in which it is usually found; discussion of the relation of the word to the related law principle is one method of doing this. Lastly, the students are encouraged to use the terms, not dodge them; report out-of-class uses they notice on TV, in newspaper, and in other classes. The teacher provides a review of the terms in frequent oral and written situations.

Typewriting. One of the deadly sins of the typist is the unfaithful reproduction of material—the miscopying of words without concern for meaning. It is a question whether junior high school students studying typewriting have the experiential background to understand the special terms used in the business letters they are to type [20]. The study of these terms, then, is essential. Hale [26] writes that students can be forced to think about meaning as they type, if some words are omitted in the model they are to copy: "We wish ___ inform ___ that we ___ placing your unpaid bills ___ the hands ___ our attorney ___ collection." In speed tests of typing, the score should be based upon corrected-words-per-minute rather than the net words [47].

Shorthand. The ideal in reading shorthand is fluent reading without hesitation [13]. If possible, students should have daily experience in reading aloud an assignment they have prepared for class, reading the next assignment without preparation to locate difficulties, and reading from homework notes. Desirably, a test of the ability to read connected material from the lesson prepared for the day should be administered each day [57]. Diagnosis of difficulties should differentiate between those errors caused by poor formation of the symbols in the student's own writing and those caused by basic similarities in form. Special exercises offering numerous repetitions of the points of confusion should follow. Students can make up some exercises for each other.

Business Machine Fundamentals. Job-instruction sheets designed to teach business machine fundamentals present a special reading problem

[41]. The teacher can make up the rough draft of the sheet from the instruction manual supplied by the manufacturer. Then students who have worked with the machine can review the sheet for omissions and put each step into their own words. The sheet may be revised with these suggestions. Then it can be tried out on some inexperienced students. Their interpretations and questions may lead to further simplification and to the identification of necessary technical words which will have to be explained prior to the use of the sheet.

If the sheet contains an illustration of the machine with parts clearly labeled, some of the interpretation of terms is obviated. Krause [41] proposes that the sheet be divided into two columns, the left-hand column for a statement of each operation, the right-hand column for key points to observe and remember in the operation.

It is clear that business educators are aware of the reading problems in their varied field and are beginning to offer substantial help in their solution.

FOREIGN LANGUAGES

In learning to read a foreign language, the student has to make a direct association between the printed word and its meaning [40]. He must know the structural and phonetic characteristics of the language and build a reading vocabulary [8, 17]. Having a definite goal or purpose, reading for meaning, and having appropriate reading material are just as important here as in the reading of English [74].

When a native language is learned in the home [30], there are not the artificial restrictions on speech and behavior that exist in the school. The home experiences build, support, and clarify meaning. The learner is interested in the day-to-day meaningful repetition, because the impressions are new and the learning is intriguing and important.

As educators we speak of certain languages as being too difficult for students of a certain intelligence level, as counselors we guide them to easier languages, yet the dullest native can speak his own. The differences are that he had individual attention and nothing to unlearn. His learning situation was relatively ideal.

If teachers of a foreign language are to approach the efficiency of home learning, they must preface the reading of the language with much meaningful experience, contriving situations in the classroom to resemble reality and increasing the amount of practice by opportunities for pairs or groups of students to converse.

Of course, long before the child imitates his parents' speech, he has listened to it, catching neither head nor tail perhaps, but developing a familiarity with the sounds of the language. Casaubon [9] concludes that the ear of the student of a foreign language should be tuned to the new

language before speech is attempted. Recordings of the language well spoken and talks by native speakers or by an excellent teacher may provide this ear training. The students should describe what they notice about the sound characteristics of the language, and the teacher should fill in with questions, guiding their further observation.

Mayer [48] proposes that the teacher start with a lecture on the physiology of speech (the characteristic positions of the organs of speech in a given language which produce accent), demonstrating those positions and then saying something in English to show how the positions affect the accent. He presents a chart of the following kind and discusses its meaning:

	English	French
1. Tension	Rather low	Quite high
2. Directional tendency	Neutral (central)	Forward
3. Favorite tongue shape	Flat, or even concave	Convex
4. Transitions	Slow; vowels diphthongize	Rapid; vowels "pure"
5. Accentuation	Stress (pitch of minor importance)	Pitch (stress virtually of no importance)

Mayer also discusses the differences in the function of similar English and French phonemes: that, for instance, *d, t,* and *n* are alveolar in English, dental in French. He follows this with drill on the new sounds to be learned.

In the Thai language [1] there are five tones which must be recognized and associated with the syllables of the language. Each syllable contains a characteristic pitch which is an integral part of that syllable. The learning of pitch in association with the symbols of the language and the meanings they convey requires that training be both oral and aural. Shen [60] claims that learning the Chinese script can be easy if a multisensory approach is used, the student simultaneously saying aloud, seeing, and writing the symbol of the word.

After practice has been given in saying, seeing, and writing the symbol, dictation can be used as a test of exact knowledge of sounds, symbols for the sounds (if it is a consistently phonetic language), vocabulary, comprehension, and fundamental grammar rules [21]. Paperback editions of textbooks in modern languages such as French, German, and Spanish by I. A. Richards and others, exemplify the effective modern technique of illustrating a situation and presenting the common expression associated with it. The films and TV programs which use this technique show the picture and present the sound of the expression, to be repeated by the listener before the same situations are reviewed with the visual symbols. Effective review would be to show the picture, present the sound of the expression, have the student repeat and write the expression from memory, then compare with the written symbols.

An easy introduction to the foreign language includes the recognition

and pronunciation of those words which the native language has in common with it. Krauss [42] has compiled English words occurring in German magazines and newspapers since 1956. In addition to those, many English words trace their origin to German cognates. Sieberg and Crocker [61] believe that many French cognates are not recognized as such by the ordinary student and must be pointed out: *hâte* and *haste, débander* and *disband*. Similarly, root groups should be noted: *feuille, feuillage, feuillée,* etc. The analogy of French suffixes to English suffixes is helpful: *feuillage,* analogous to *cordage, plumage, bandage*. The meanings of the English suffixes assist in the interpretation of French suffixes.

Through the study of metaphors the student can establish in his own mind the meaning of a given word [45]. When we *ponder,* we *weigh something in the mind*. This is the clue to the meaning of the Latin word *pondus, weight*. When we *deliberate* we *balance* or *weigh* ideas. *Libra* means *balance*.

It is a happy thought that one can lean on a dictionary as one translates a language, but bilingual dictionaries in many cases still fail to be dependable guides to proper equivalents in the foreign language [29]. Apparently the teacher is not entirely dispensable! Also, as in the case of English, the student must study the passage in which the word occurs to decide what meaning the context forces upon it.

In choice of words to include in beginning language courses, it is encouraging to find that over 90 per cent of written foreign language is within the first 2,500 most frequent words in the English language, according to Spaulding [62], reporting a study by Calbick, Wade, and Banner. Whether the objective is the reading of the language or the speaking of it, it is probable that most of these words would be useful. Furthermore, because they are common in English, they present no meaning difficulty; and because they are common in the foreign language, they are encountered enough to be easily retained. Spaulding urges that early language training be kept within this vocabulary, and that the training include meaningful contexts and a repetition that requires attention to thought as well as to symbol. Spotts [63], on the other hand, believes that in the case of Hebrew, the basic vocabulary depends upon whether the purpose is reading or conversation. Because Hebrew is an ancient as well as a living language, the difference between the reading and speaking vocabularies is, in some instances, marked. He presents a bibliography of forty-three references on vocabulary problems in Hebrew.

Certainly an objective of teaching the reading of a foreign language is the understanding of what is read and, with it, fluency of reading. Jones [38] reports that Spaniards read aloud on the average of about 165 words per minute. Surely then, he says, our students of Spanish should be able to achieve that speed in *silent* reading. But such speed, if it is to be accompanied by accurate understanding of the content, is for many students blocked by certain pitfalls. Some students retard their own speed by lip

movements, with which they try to assist recall and to perfect oral interpretation. Others, finding the material unfamiliar in content and vocabulary, and beset with words of multiple meaning, take refuge in inattention and distractions.

Jones suggests that the student first skim through the material for unfamiliar words and look them up, rather than punctuate his reading with excursions to the dictionary. Or he should read the whole assignment as quickly as possible, reading only essential words: *El* hombre *con el* sombrero *de* felpa *se* levantó *de su* silla *con* ira. (Unfortunately for this idea, it has been found in the reading of English that, while the essential words are noticed by the good reader, those are the very ones the poor reader is apt to skip. Perhaps this should be a technique reserved for good readers only.) Then a second reading should take place, with study of the unfamiliar words. Have they English cognates? Do I know the root, the prefix or the suffix? A list of roots, prefixes, and suffixes is a good reference tool. If these moves fail, the student resorts to the dictionary. The third step in the Jones plan is rapid rereading, with a deliberate attempt to think in Spanish rather than in English.

One cannot help thinking how lucky the bilingual child is, whose teacher does not know his home language, who must catch English from present situations, and whose dictionaries explain English words entirely through pictures and, later, with the addition of English words, phrases, and sentences. While the going is rough, the method by which he is learning reduces the danger of his thinking in the home language.

Jones believes that several kinds of knowledge and activity can foster speed in reading a foreign language [38]. The student should know that the subject and verb agree with one another, that certain prepositions are associated with certain verbs, that the noun and adjective agree and maintain a certain relative position. He should be invited to guess at the word, much as we do in English when the context and the shape of the word are enough to suggest the identity without a careful look. Practice in reading common phrases will establish common associations. Sentence cards can be used for quick recall exercise. Long assignments will force quick reading. Spanish versions of familiar stories can be read more rapidly than stories new to the student. The student should know the purpose of his reading, what to find out from the content.

These are a few of the ideas to be found in the professional literature on the teaching of reading a foreign language. As in the case of early studies relating to the teaching of reading English, there are more articles expressing concern for word meaning and word analysis than there are for larger units of comprehension and interpretation. This is understandable, but something to be aware of, too, as we consider our progress toward the goals of teaching a foreign language, or, indeed, our own.

HOME ECONOMICS AND INDUSTRIAL ARTS

Reading in home economics, industrial arts, and school shops is highly practical. The information gained from reading is immediately applied and comprehension is tested by use. A sound sequence is (1) demonstration of the tools, materials, and processes; (2) vocabulary study [66, 67, 68, 69, 76]; (3) practice and instruction in reading the specific directions for the day's work; and (4) testing comprehension by carrying out those directions.

If we were concerned only with laboratory performance in the school, the reading of these subjects might deserve little attention. But future activities of the students in these demand acquaintance with the kinds of reading matter which would otherwise form a barrier between the adult and his do-it-yourself endeavors. A recipe, a pattern, a sheet of directions must be read if the cake, the coat, and the installation of auto parts are to turn out well.

One of the major problems facing the teacher is that the poor reader turns to these subjects in the expectation of relief: "Here you do things; you don't have to read about them," he thinks to himself. But the first thing he is given when he enters this happy hunting ground is a textbook or worksheet which bristles with technical vocabulary, and with photographs, line drawings, or diagrams which cause almost as much bewilderment as clarification. This escapist attitude, plus the resentment or paralysis which follows disillusionment, makes the teacher's job one of rolling stones uphill.

Home Economics. In many ways, home economics is a natural for solving the reading problem. Its subject matter is treated in popular magazines written at an easy adult level. Food columns and clothing tips in newspapers are similarly presented. In both newspapers and magazines there are copious illustrations to accompany the verbal material. Considerable pamphlet material, including government publications, is available. Students cannot only realize the general importance of the subject, but find information on it in rather palatable form.

Furthermore, the field has developed many attractive charts and bulletin-board displays and ideas for such material [75]. If labels are included in these displays, the students can be aided in associating the written symbol with its pictorial counterpart. Teachers are increasingly appreciative of the value of photographs in this work, and of films of actual processes [5].

Home economics teachers are familiar with *Co-ed*, the magazine published by Scholastic Magazines "for career girls and homemakers of tomorrow." In the teachers' magazine *Practical Home Economics*, suggestions are made for activities which might follow the reading of the articles in *Co-ed*. These activities extend the influence of the ideas read, but the solution of the reading problem itself—what to do *before* the article is read—is left to the teacher.

Recent textbooks in the field are probably some of the most attractive books intended for school use. Many illustrations—charts, graphs, photographs, line drawings, diagrams—illuminate the verbal text. The printed words in size of type and in spacing invite the reader. Chapter headings are frequently of the chatty sort: "Anybody Hungry?" Chapters sometimes start with an outline of the chapter so that the student can see where he is going and what will probably be expected in recall. Subheadings throughout chapters signal the new topics. Italics stress important words. Technical words are frequently defined. An occasional chart, such as one naming and describing the popular colors, rescues the student as he meets words like *chasseur*. Chapters conclude with questions and suggested activities, a bibliography for further reading, and a list of films and filmstrips for viewing. The textbook closes with an index.

All of these features are good, but even they demand teacher assistance. The student must be helped to know what to do about the outline (skip it?), how to read the chart, how to select words for special study, how to react to a subheading or italics, and how to read the index. Not that he may not have been exposed to these tasks at some previous time, mind you. He is still learning good reading habits or falling into bad ones, depending upon the teacher.

What words does he not recognize as he looks at the outline? What questions can he ask himself that, the outline suggests, he will find answered in the chapter? What motives can he himself conjure up for wanting to read the chapter? for thinking it is important? What clues can he find to the meaning of a technical word as the text presents it? Can he summarize the contents which follow a subheading? What notes should he take? Can he compare the verbal text with the illustrations given? Can he find a topic by looking for it in the index? A teacher finding the answers to these questions is beginning to recognize her role in the teaching of reading in home economics.

These books would benefit by a glossary of technical terms. Until they offer this feature, a teacher and class will have to take the responsibility. Barnes [2] in college food-preparation courses has found over a period of years that students have trouble with the following terms. Now she starts the course by having the class prepare a glossary. This is actually a much more impressive learning experience for the student than having a ready-made glossary before him.

acidity	brewing	coagulate
alkali	caffein	coalesce
amino acid	caffeol	collagen
amorphous	calcium caseinate	colloidal
aromatic	caramelization	crystallization
astringent	carbohydrate	curdling
barley sugar	carbon dioxide	dehydration

dextrinization	gluten	saccharide
dispersion	homogenization	saturated
emulsion	hydrolysis	sodium bicarbonate
endosperm	hydroscopic	steeping
entree	infusion	super-saturated
enzymes	irradiation	suspension
fermentation	marinate	syneresis
foam	micro-organism	vacuum
gel	osmosis	viscogen
gelatinization	pasteurization	viscosity
globule	proteolytic	volatile

Study and discussion of these words immediately prior to their appearance in the text extend understanding of the course as well as enhance the subsequent reading.

Clearly technical words are only part of the vocabulary problem. What is the student to think when he comes upon the sentence, "Screw the small eyes for the picture wire back in place." And if he has been used to basting a hem, what will he do when he bastes a chicken? An author familiar with the terms in his field does not always realize the confusion he creates when he enumerates ingredients for a salad as "leafy herbs like tarragon, burnet, basil, lovage, watercress, young mustard leaves, rosemary, sweet marjoram, chives, quarters of small scarlet tomatoes, rounds of gold and white hard-cooked eggs." Where do the herbs leave off and the other classifications begin?

While many good readers in junior high school are able to digest the text whose first 150 words include *analyzing, survey, personality, appearance, critical, stimulate, improvement, traits, performance, enrolled, laboratory,* and *unit,* those of third- and fourth-grade reading levels are completely unnerved. Expressions which have meaning for the author and the teacher may create only mystery for the student: *good emotional control, sleeping habits, child care and development, settled tastes, nominal charge.*

Some teachers have met this problem by finding simpler texts or pamphlets for the poorer readers to use during the study of a topic. Some have rewritten the material in a simple, abbreviated form. Others have collected over a period of years the written reports of able students, which present on an easy verbal level and with illustrations what the students have gleaned from more difficult sources. Still others have the poorer readers gather from class discussions the gist of what has been read by others and write booklets of what they now know, the technical terms and processes illustrated and labeled on the left-hand page of the booklet, the text on the right-hand page. This last requires that the teacher write the technical terms on the chalkboard as they are mentioned in discussion, perhaps illustrating them with quick line drawings, and write key points as they are developed.

There is a further difficulty which only the teacher can amend. Home

economics deals with a three-dimensional polychromatic subject and cannot, even with pictures worth a thousand words and the simplest of texts, convey exact meanings. How should you *wash* fruit, *remove* skins, *quarter* and *core* and *dice* apples coarsely? What *rough covering* do you remove from the banana? What is meant by *mixing gently?* What would be a *contrasting fruit* for the top of the salad? Clear pictures and carefully worded steps may guide the student in his understanding of bound buttonholes. But bound buttonholes consist of a *slit* in the *material, finished* with a *strip* of *matching* or *contrasting fabric.* "What is the difference between *material* and *fabric?*" the insecure student wonders. *Sew binding in place.* How? *Turn binding to wrong side.* How much, how far? Through slit? *Pin binding in place on wrong side.* What is *in place*—where I'll put it or where the teacher knows it should be?

It is fitting that such directions appear in textbooks, since adults must know how to read such directions. But it appears essential that they be read with the teacher, not without her; and that the teacher have a large model which all can clearly see to demonstrate the process. Stereoslide viewers, films, and three-dimensional displays can be valuable additions. If the teacher can fill this role with positive interest in student problems and without a disgusted or punitive attitude, more students may learn how to read in home economics.

Industrial Arts and School Shop. In a survey of the reading ability of 250 students at the J. M. Wright Technical High School in Stamford, Connecticut, Goldstein [22] found the average reading grade to be 8.6, with a range from 4.9 to 12.0. According to the Gates reading test, 54 per cent of the students were reading at levels between 5.0 and 8.0.

Such a range demands that the general vocabulary in which materials are couched be differentiated for able and poor readers, and also that the technical words which are essential to the subject be identified and concepts clarified prior to the need to read them. The field is indebted to Strandberg [65] for identifying eighty-eight words having special meaning in the printing industry, to Huffaker [34] for trade terms used in the machinist trade, and to Suerken [67, 68, 69] for glossaries of terms used in printing, machine-tools and job-machine shops, and heating and ventilating. In printing, the knowledge of spelling is a necessary part of typesetting and proofreading. Morris [50] offers some spelling rules which are helpful to the printer.

Ferrerio [19] has presented many ideas for teachers of retarded readers in industrial arts. To help the student associate the verbal symbol with the object or process, he suggests a chart such as this:

Fastener	Tool
nail	hammer
screw	bit brace
dowel	glue, clamp

Pictures or drawings or part of the actual object may accompany each word. Students who help develop such charts and who are then required to refer to the charts as they work or discuss, gradually develop a visual image of the symbol and oral mastery of it. Ferrerio also suggests such activities as labeling objects and pictures, carrying out directions in simple phrases and sentences, using riddles based on a tool or a process, telling the story of a tool, matching illustrations with directions, making picture dictionaries, finding basic word elements in the technical words, listing words in alphabetical order, using filmstrips with industrial-arts vocabulary, making a chart of industrial-arts vocabulary, using commercial charts of materials and processes, having students write simple directions, and having them keep vocabulary notebooks. For interest, he would draw the students' attention to the popular uses of industrial-arts terms in such phrases as, "Put your nose to the grindstone," or "Have an ax to grind."

There are possibilities for confusion in the textbook or worksheet itself. A textbook in general shop may introduce words it never explains: "Sloyd and hunting knives have fixed blades." (Sloyd only knows who Sloyd is.) A picture is labeled, "Cutting out a mortise." *Mortise* is never explained. The student should look up these terms, of course; but a glance at the contents of one chapter in such a book will explain why he doesn't. There is tremendous coverage in a limited space, with too many essential and superfluous technical terms mentioned in quick succession and not enough repetition to make them memorable.

Clearly the teacher must compensate with activities such as Ferrerio has mentioned. Schramm [59] finds that labels naming the parts of a machine can be attached with magnets. The students can learn the names by seeing them so attached, by using those names deliberately when talking about the machine, and by having to reattach the labels to the proper parts.

Perhaps a librarian should have the last word. Mudge [51] claims that teachers of school shop should not avoid library opportunities for the students; rather, have the student go to the library to find material for a special report on wood, steel, etc.; examine magazines such as *Popular Science, Popular Mechanics, School Shop,* and *Industrial Arts and Vocational Education* for projects; obtain group instruction on sources of industrial-arts information in the library; and obtain vocational information.

MUSIC

The active interest of music educators in the problem of music reading is reflected in some of the titles of recent studies in the field [10, 12, 14, 54, 64]: *The Reading of Rhythm Notation Approached Experimentally According to Techniques and Principles of Word Reading, A Study of the Relationship between Language Reading and Music Reading, The Effectiveness of Music Dictation as an Aid to Music Reading in Grades*

Seven and Eight, Recommendations for the Adaptation of Some Language Reading Techniques to the Music Reading Program, and *An Evaluation of the Tachistoscope as an Aid in Teaching Rhythmic Reading.* The music reading of the vocalist requires the reading of clef and key, of notes, of directions for volume and tempo, and of words below the staff. That of the instrumentalist requires the reading of chords as well as single notes. And, as we all know, accuracy in reading music can be reflected only in accuracy of the music produced by the singer or instrumentalist. One may be a good reader and still sound dreadful.

In addition to these reading requirements, there are books of music theory and books about music and musicians which present varied reading tasks to the student. Stories about music and musicians written on different levels of reading difficulty [3, 25, 44, 73] enable the poor reader and the able alike to gain background in music appreciation.

Wheeler and Wheeler [72], studying the interrelationships of the tested ability of fifth and sixth graders in language, music, and intelligence, found only slight relationship between language-reading scores and music-reading scores. Yet language reading and music reading appear to have a number of elements in common. Two studies of eye movements in reading music have shown that eye movements in scanning a musical score are similar to those in ordinary reading [46, 71].

Jacobson's detailed report of an eye-movement study [36] of students of various ages agrees with this finding to an extent. The immature music reader makes many fixation pauses, long pauses, many unnecessary pauses, and 70 per cent of all possible errors; has little or no eye span (one note), as many as twenty-eight regressive movements for twenty-eight chords, and poor rhythm. The average reader makes a short pause, and 40 per cent of all possible errors; has an eye span up to two notes, a distinct rhythmic eye movement, and a habit of reading chords from the top down. The mature reader makes 6/25-second pauses, only 4 per cent of all possible errors, and few regressive movements; has an eye span up to four notes, good rhythm, a chord-reading technique of reading from top to bottom, and a zigzag technique of reading two clefs.

Jacobson found that music syllables benefit the mature reader very slightly and handicap less mature readers; more errors are made in ascending than in descending notes; words that are broken into syllables are hard to read; mature readers require less time for reading notes than for reading words, while the immature are slow for both. He recommended the practice of silent reading of the notes and words before singing as a great aid in obtaining accuracy and speed.

Another parallel between language reading and music reading is found in a suggestion by Miller [49]. Just as reading words is best preceded by hearing and saying words, so teaching the use of an instrument by rote makes a helpful preface to the reading of music. Understandings can be built through the use of films [55]. Musical terms create a reading problem

which Reidel [56] has helped to meet in a glossary of about three hundred words peculiar to music.

The controversy over whether one should be taught the names of letters before he is taught the sounds of letters in language reading is reflected in the war over syllables in music reading. Nye [53] proposes that most students not be confronted with them. Rather, he believes, the teacher should start with the rhythm of words, of walking, of skipping, etc., putting dot-dash notation on the chalkboard. For the pitch concept he advises the xylophone with youngsters, the Autoharp with older students. In conducting, the teacher should indicate high notes by holding the hand high.

The first musical notation, he believes, may be numbers written on bars on the chalkboard, then numbers below the actual notation, then numbers used only to start the playing of the tune, and finally the elimination of the numbers entirely. He thinks that a listening, singing, seeing, playing approach is more effective than the syllable approach for most beginners.

Sight reading is of considerable interest to music educators [16, 32, 35]. In a study of fourth-grade music students, Hutton [35] found that the use of the chalkboard was less effective than the use of flash cards, musical games, slides, and opaque projectors to teach the skills related to learning songs.

OTHER SUBJECTS

The reading problem exists in fields such as art, driver education, physical education, recreation, and health. Much that might be said of skill development in these fields has already been given earlier in this and other chapters. But what more should be said? There have been seventy years of research on the nature of reading and the problems of teaching it. Yet, year after year, in thousands of classes all over the world, the same violations of sound practice are repeated in good faith. Every teacher in every field should learn how to put the findings of this research to work in his classes. And many more teachers than have so far volunteered should appoint themselves investigators of the reading problems peculiar to their areas, explorers and reporters of successful techniques.

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CHAPTER 9

Developmental Reading

Developmental reading means different things to different people: using a basal-reader series to give continuity to instruction, at least through the sixth grade; giving all students one or more courses in reading in the junior high school or at other strategic points; or giving all students reading instruction in every subject. In a developmental program as here conceived, the important reading skills would be reinforced and refined throughout all the school years and into adult life. This chapter will offer suggestions for establishing such a program.

GOALS OF DEVELOPMENTAL READING

Underlying this view is the assumption that if the student is to become an effective reader he needs systematic, sequential reading instruction and practice to modify, reinforce, or enhance skills partly developed but not yet mastered, and to widen his repertory of skills. He needs these skills in order to cope with today's plethora of reading materials, with the present prevalence of propaganda, and with the various technical vocabularies that are becoming more and more important to an understanding of the modern world [3, 39]. It is as important to teach the tools of learning as to teach facts. As students come to do more advanced work and to broaden their fields of interest, they need to develop more sophisticated and refined habits of reading and study.

In addition to continuity throughout the school years, the developmental reading program needs breadth of scope. Reading is integrated with other

communication skills—listening, speaking, and writing—some of which follow individual developmental patterns [28]. Both multilevel and multi-interest reading materials and methods of instruction must be adapted to diverse backgrounds and learning capacities. How much of the instruction will be general and how much individualized will depend upon the abilities of the students, the skill of the teacher, and the amount and variety of the available reading material.

The developmental program helps to build new interests as well as to use old ones. Reading opens doors, takes the reader into new places, brings him into contact with both real and imaginary characters whose interests and ideals he may or may not wish to adopt. Interests often lead to further reading.

The aim of all developmental reading programs is to produce effective readers [27]—readers who like to read, who are not deterred by any reasonable difficulty, who are independent and analytical in their reading, who are capable of literary appreciation, and who are interested in the possibility of a better life and a better world. In short, the goal of developmental reading is to help every student develop his potentialities. However, "there has been so little actual research on the values of developmental reading that it is impossible to say on the basis of objective information how well developmental reading programs are functioning" [42, p. 11].

Hoyt and Blackmore [20] obtained some evidence that children in both the high and low thirds of a group of fifty first graders began by doing slightly better in reading than might have been expected, but dropped below expectations in the intermediate grades. The most decisive factor in this drop seemed to be the nature of the reading instruction they received in the fourth, fifth, and sixth grades. Pupils who were left entirely on their own, who were not helped to consider their purpose in reading a story, who received no special help in vocabulary, who had no chance to discuss or to take part in extra activities related to their reading—these children did not see reading as a means to enjoyment, discovery, or personal development; to them it was mere routine. This study would indicate the need for a developmental program.

DEVELOPMENTAL–CORRECTIVE–REMEDIAL

What is the difference between these approaches to reading? They all belong in the whole-school reading program (see Chapter 3). The developmental program provides continuous instruction for all students from kindergarten through college. Its firm foundation is the instruction in reading given by all the subject teachers. Developmental reading courses also may be offered most frequently in the seventh and eighth grades, following the slump in reading achievement which many children undergo in the intermediate grades.

Corrective instruction is given to students whose learning capacity is adequate, but who are so deficient in word analysis, comprehension, and study skills that they cannot profit by regular class work. They are usually taught in small groups for two or more periods a day (see Chapter 10). The word *remedial* is usually applied to work with students whose difficulties are still more serious and complex, and who need more individual treatment. Both corrective and remedial instruction should be considered as temporary expedients.

In addition to small corrective and remedial groups, advanced reading classes for able learners and reading classes for foreign-born students are necessary or desirable in some schools. In these ways the school may provide for the reading development of all its students.

DEVELOPMENTAL PROGRAMS IN ACTION

A State-wide Program. The most determined effort to implement a developmental reading program was the decree of the Pennsylvania State Council of Education in February, 1958. This decree provided for a planned program of reading instruction for all pupils in grades 7 and 8. It could be either remedial or developmental; it could be offered in connection with English or as a separate subject. The council encouraged the continuation of this instruction through the senior high school years. The council defined developmental reading as a program that reaches every pupil and provides for his continuous reading growth in the light of his capacity. It was assumed that the pupil's reading at the end of the sixth grade was not efficient enough to meet his needs in high school, in college, or in adult life. Consequently, he needed to learn new skills and to develop and refine skills he had acquired in the elementary school. He also needed to broaden and intensify his appreciations, whether his ability were low, average, or superior.[1]

Developmental Reading through the Content Fields.[2] In the Norwalk, Connecticut, high school, Dr. David Shepherd, reading consultant, had as his main function working with teachers in a broad type of developmental reading program [37]. He recognized that each teacher should know three things: (1) the reading skills that a student needs to succeed in his subjects, (2) how to assess each student's proficiency in reading the subject, and (3) what to do about the diagnostic information he ob-

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[1] *An Administrator's Guide to Reading,* Educational Leadership Series, no. 2, Department of Public Instruction, Commonwealth of Pennsylvania, Harrisburg, Pa., 1958.

[2] This description will be written from the standpoint of the reading consultant, whose task is to help each teacher to contribute to the total program and to coordinate the efforts of all. Details about the teaching of reading in the various subject fields are given in chaps. 5–8.

tains. It is also important that the teacher incorporate reading instruction into the teaching of the subject itself, rather than regarding it as something extra. Accordingly, the consultant should help each teacher to see the relationship between reading and the problems about which the teacher is concerned.

To develop these points of view the consultant met with the entire faculty to discuss the practical questions in which they were interested. How to make questions that test students' ability to draw conclusions? How to group students within high school classes? Where to get reading materials in a given subject that are suitable for the retarded reader? How to meet the needs of students whose reading ability covers a range of from seven to eight years?

At first the teachers wanted the consultant to come into their classes and give demonstrations of how to do the things he was talking about. Later they wanted him to observe their reading, supply reading materials, and schedule individual conferences in which they could talk over his demonstrations, their own observations, and the results of informal inventories. There was a gradual shift of emphasis from demonstrations by the consultant to acceptance by the teachers of responsibility for working out instructional methods in their classes.

One of the most useful demonstrations was that which showed how to give and use the informal inventory (see Chapter 14). Other demonstrations included the preparation and presentation of a well-organized report. He emphasized quality rather than quantity. Assignments were kept short until the students had learned to read a paragraph effectively. Systematic and thorough mastery of reading skills will enable students to make greater progress in the subject as time goes on.

A somewhat similar program, combined with corrective and remedial work, was described by Robinson and Udall [34]. Here the consultant's chief responsibility for the developmental program was to make classroom visits and demonstrations and to provide materials. In the corrective and remedial programs, his work involved diagnosis, scheduling, work with students, and consultation, when necessary, with teachers, counselors, nurse, administrators, and parents.

There are many advantages in a developmental program in which teachers learn how to improve their teaching of the reading of their subject, and in which their efforts are coordinated by a capable and tactful consultant. The program is closely related to instruction. The reading skills learned are immediately applied. Learning is motivated by the student's desire to succeed in the subject. The subject teacher, especially in the upper years of high school and in college, should be expected to know more about the best methods of reading his subject than even a well-trained reading specialist. Success in using this approach depends on enlisting the interest and cooperation of all the teachers, maintaining a rela-

tively low proportion of seriously retarded readers, providing effective leadership, and securing an adequate supply of suitable materials of instruction.

A Program for Reluctant Readers. The curriculum committee of one senior high school proposed to introduce a course called Motivated Reading for all students. Since most of the students in this school were able learners who could read but did not, the aims of this course were to persuade them that reading is not drudgery, to interest them in reading, and to encourage them to do more voluntary reading. The main features of the course, as it was tentatively tried out, were as follows:

I. Each student wrote a reading autobiography. This gave him perspective on his reading development up to this point.
II. At the teacher's invitation, the students made suggestions for conducting the class: each student would select a topic that interested him and read on that topic both in and outside of class. They might choose fiction or nonfiction; they could try more difficult books than those they had been reading and share their reading experiences with the other students.
III. The teacher obtained the help of the librarian in making books available and helped each student select books on his topic that he could read on his own. While the students were reading independently, the teacher held conferences with individuals to—
   A. Diagnose their reading difficulties and give them help as needed.
   B. Elicit their responses to the books they had been reading.
   C. Suggest other books that would shed light on a given topic—if necessary, upgrading with respect to literary quality, or downgrading with respect to difficulty.
   D. Suggest ways of presenting the ideas they had gained from their reading in a form that would be interesting and worthwhile to the whole class.
   E. Show to the class as a whole ways in which they could record their progress in reading; for example—
      1. *Using My Reading Design* [38] shows the areas in which a student is reading and reveals whether they are narrow or wide.
      2. Book reviews acquaint students with books others have enjoyed and profited by. These reviews may be published in the school paper or the local newspaper, filed in a card catalogue in the library, or published in mimeographed form and put out by the class.
      3. A simple form may record—

Date	Author	Title	Where I got it	Why I read it	How I liked it

IV. The teacher asked the students to continue their reading autobiographies and to include details about their progress in the course and an evaluation of the course.
V. The teacher asked the students to note and record any changes in points of view, attitudes, feelings, or behavior that they could definitely attribute to something they had read during the course.

In order to make his own evaluation of the students' progress, the teacher watched for changes in their attitudes. Certain students took a more positive attitude, reflected in increased voluntary reading. Some read a whole book for the first time in their lives. In the class itself the students showed consistent interest, and the teacher found the class work a stimulating and pleasurable experience.

In a controlled experiment comparing four approaches to the improvement of reading in a developmental program at the tenth-grade level, Leavell and Wilson [23] found that guided free reading compared favorably with (1) use of mechanical devices such as tachistoscope and reading accelerator, (2) direct teaching of reading skills without machines, and (3) a prescribed course of study. As a result of this research, it was recommended that the majority of tenth-grade students be given a combination of systematic vocabulary study and accelerator training together with a guided free-reading program.

Developmental Reading in English Classes. A freshman English course may be built around a reading program and based on the needs of the students [30]. According to Early's survey [14, 15], developmental programs, in so far as they offer reading instruction to all students, are generally conducted by the English department as part of a regular English course. Few schools are satisfied with remedial or corrective programs only.

Developmental Reading Courses. In many schools a separate course in reading is now being offered to all students of a given grade. In South Philadelphia High School, where the small-group remedial approach had been in operation for many years, the principal introduced a developmental reading course for tenth-grade students.[3] The two reading teachers in the school each teach four of these developmental reading classes of about twenty students, meeting twice weekly. Two or three English teachers teach the remaining classes. The reading teachers assign the students to these classes according to three levels of reading ability—A, senior high school; B, junior high school; and C, elementary school.

Any administrator who introduces a developmental reading program of this kind is immediately confronted with two questions: How is the course to be conducted? Who will teach it? The plan described followed a sound procedure in placing responsibility on the reading teachers and selected English teachers. This plan may eventually involve all the English teachers in the program.

Another type of developmental course was given in the ninth grade, in addition to the regular English course, which included grammar, literature, spelling, and written and oral composition [16]. This course was sectioned into three parallel groups: (1) laboratory groups using reading pacers and other kinds of drill (twice a week); (2) free-reading groups (three times

[3] *Developmental Reading: Grades 7, 8, and 9,* Curriculum Office, Philadelphia Public Schools, Philadelphia, Pa., 1959.

a week); and (3) reading-problem groups for students who had a marked deficiency in vocabulary, eye difficulties, a nervous reaction to the machines, or evidences of other emotional strain. Good readers who did not need the systematic practice spent their time doing extra reading or serving as library assistants. Nonreaders were placed in special sections for remedial work. The success of this program would depend a great deal on effective diagnosis of individual needs and skillful provision for them in the three types of groups.

The *content* of developmental reading courses varies with the needs of the students. It may include any or all of the following activities:

Vocabulary building by systematic study of words in context, using both textbooks and recreational reading; taking part in activities that create interest in language; selecting words that one wants to know; acting out word meanings; making sentences more vivid by finding more expressive words, etc. (see Chapter 16)

Paragraph comprehension by study of paragraph structure and practice in recognizing the main idea and supporting details

Relating and organizing ideas by writing summaries and outlines

Enrichment of meaning by use of sound-motion pictures, filmstrips, and other audio-visual aids

Use of reading in choral speaking, discussion, writing, and dramatization

Voluntary or free reading, with no strings attached, but with emphasis on development of personal qualities and social concern

Many *approaches* are used in developmental reading courses, depending on the age, abilities, and attitudes of the students.

In the most common approach, the teacher depends on a workbook or practice exercises selected for the class as a whole, on the assumption that all the students need systematic practice in the reading skills required at that particular educational level. If the group is so homogeneous that all its members profit by this practice, this approach is useful.

When the group presents a wide range of reading achievement, individualized reading exercises such as those developed by the Science Research Associates reading laboratories are useful. Both of the above approaches are appropriate for students who are motivated to improve their reading.

However, there are some students, especially in the junior high school, who dislike reading, have never found pleasure in it, do not recognize its importance, and hence are not motivated to improve. The approach to these students must be different. They need opportunities to demonstrate to themselves that reading can be both enjoyable and useful. To help them find the rewards of reading, teachers try to find exciting games and books of intrinsic interest that are a little below their instructional level.

A program of motivated free reading such as that described on pages 201–202 may be a sound approach for students who have acquired basic

reading skills but who do little voluntary reading. Emphasizing the pleasure to be gained from reading fosters habits of voluntary reading that may carry over into adult years. Another approach is to begin with the needs of the students, and to use their assignments in various subjects as practice material. This requires close cooperation with other teachers. It has definite advantages: it helps the students to become more successful in their other classes, and it avoids wasting their time in drill on techniques they have already acquired or cannot immediately use.

What can a course in reading do? To paraphrase a passage in Perry's article [32], a good course in reading can show a student habits of mind and ways of thinking and reading that are preventing him from getting what he needs to get as quickly as he needs to get it. If a student is submissively reading the author's every word, the course can provide exercises that will make him assert himself—exercises which show up deadwood and irrelevancies that any intelligent person would skip; exercises that enable him to demonstrate to himself that he can get the information he wants by an appropriate kind of skimming; exercises in which he can guess the main idea of a paragraph from the first sentence or two. In contrast, there will be some exercises in which every word is significant. (See I. A. Richards's *How to Read a Page* [34].) Any developmental program must be concerned with the personal values to be found in reading, for example, the understanding of human behavior that accrues from the interpretation of literature or history.

The most effective approach in a developmental program combines (1) an initial study of how the students read, what they read, and why they read, (2) class instruction in the reading skills needed by all, (3) small-group instruction for those who have similar difficulties, (4) conferences with individuals, and (5) encouragement in free reading. A coordinated program of which developmental reading is the core, and in which all members of the staff participate, is essential to a school-wide gain in reading.

TEACHING PROCEDURES IN A DEVELOPMENTAL PROGRAM

Teaching procedures follow a developmental sequence, but can be adapted as necessary, especially in working with seriously retarded readers.

Learning to Read for Meaning. The kindergarten teacher makes children aware of doing things in sequence and seizes every natural opportunity to have children notice likenesses and differences in shapes and sounds. Classifying experiences comes naturally, too, as they put all of one kind of thing together. At every opportunity, objects in rows are viewed from left to right. Thus children become accustomed to this direction which is so important in reading print. By reading stories aloud and encouraging children to tell their own stories of incidents in their school and out-of-school

life, the teacher increases their skill in the use of English and builds readiness for understanding sentences and bringing meaning to the printed page. They hear their best stories again on tape recordings. They talk together as they work.

In the primary grades children develop a sight vocabulary and are oriented to meaningful reading by experience charts. They make an excursion to the park and return to discuss their findings. "Let's write a story about our trip to the park. What shall we call it?" "Our Trip to the Park." The teacher writes this on a large sheet of paper before the children, pronouncing each word as he writes and trying to stand in such a way that all can see. "Let's all read it." He runs his hand under it from left to right and the children say, "Our trip to the park." In the same way he elicits the rest of the story.

That night he prints this story on a large chart and the next morning appears with it. The children reread the chart with comprehension clues from the teacher: "What did we call our story of our trip to the park? Where does our first sentence tell where we went? What did we see? What was the squirrel doing?" Children come up to the chart to identify each sentence and read it aloud, running their hands under it from left to right, or cupping their hands around it (framing) to show which sentence they think they are "reading."

Children who are ready to read will be able to identify sentences out of their regular order, sentences printed on strips of tagboard and set along the chalk tray or in a pocket chart. They will be able to match the sentences on the strips with sentences on the chart by holding the strip below the sentence on the chart and reading aloud. They will be able to break the sentences into phrases when the strips are cut into phrase parts and held under the sentences on the chart for matching and reading aloud.

Our Trip	to the Park.
We went	to the Park.
We saw	a squirrel.
He was eating	nuts.

Someone will be able to say, "Two of those sentences begin alike." The teacher says, "Let's read those two sentences and listen carefully to hear what that like part is: *We* went to the park. *We* saw a squirrel. It's *We.* Find it and read it for us."

There are those who advocate only incidental teaching of a sight vocabulary until letter names and auditory discrimination are well established. Children who are able to match both capital and lower-case letters do not need readiness exercises of this kind.

Life experience and language experience are essential for reading of any material at any age. The elementary teacher recognizes this fact when, in introducing the word *circus,* he asks, "How many of you have ever been

to a circus? Would you tell us what the circus was like, Johnny?" The building of background for reading a story and the presentation of new vocabulary are done simultaneously. A quick line drawing on the chalkboard, maps, charts, filmstrips, motion pictures, and recordings; interviews, dramatic presentations, demonstrations, and excursions are ways of laying the groundwork for meaningful reading. It is equally important for the teacher to draw upon pupil backgrounds: "How many of you have visited a radio station? What was it like? What kinds of jobs did the employees have? Well, this is a story about a boy who applied for a job in a radio station." In this manner the setting and the human problem are given reality, and the pupils are more interested because they find that the story touches their own lives in some way. Already this is a far cry from, "Turn to page 97 in the pale green book and read the next story," or "Look at the blackboard for the next assignment."

Building Vocabulary. Vocabulary is built naturally and progressively in a developmental program. A rotating committee may skim new assignments for technical words to give the rest of the class clues before they read the material. Another aid to meaning is to associate the word being studied with other words related to it—its several meanings and its relationship to words with which or under which it might be classified. We need also to study it according to its function. And we need to make sure that the students are not confusing it with its homonym or antonym.

"This word means the same as _____." "This word means the opposite of _____." "Read the sentence on the chalkboard and decide the meaning of the word as it is used in the different sentences. Which meaning of this word is new to you?" "What does lymph do?" "Under what general topic might we classify _____?" "This word sounds like one you know and use commonly. What is the meaning of the one you use? Read this sentence and decide what the new meaning is."

A symbol is better remembered if it has an emotional meaning to the learner. Sometimes the emotional meaning is intrinsic, as in the word *mother*. Sometimes it comes through association with activity which has an affective meaning to the pupil. If we, ourselves, recall something and try to determine why we recall it, we often find it is because we were embarrassed, proud, angry, or excited.

While the teacher draws out the answers to questions and has pupils relate their own backgrounds to the story, he writes on the chalkboard the words the pupils use which are going to be the new words in the story. It is important that the teacher write on the chalkboard so that the writing is in full view of the pupils, pronouncing the word slowly as he writes it [1]: "The speakers in the studio use a microphone" (writing mi-cro-phone or, preferably, writing a short phrase using the word). "Let's all say it together, mi-cro-phone" (running his hand from left to right under the word). In this way the pupils see the word develop from left to right so that the

direction of it is unmistakable; they have a multisensory experience, seeing, hearing, and saying simultaneously [17]; they are conscious of the meaning of the word as they view it; and they see the word *in habitat* so that the eye is doing the same kind of job it will do when the word is met in the story itself.

After the new words have been introduced in context, some teachers review the words by asking comprehension questions: "Who can find and read the phrase that tells what the speakers use? *Underline the new word and repeat it.*" Other pupils should be required to look at the passage as it is read aloud; otherwise they are not getting an additional sensory experience with the new word.

The introduction of new words may also involve looking them up in the dictionary for meanings or pronunciation. This gives importance to and practice in dictionary skills. However, some new words will deliberately *not* be introduced by the teacher if they are well introduced by context clues in the text (Mother stood over the hot _____ all day cooking.) or if the pupils already have the word analysis skills to solve them for themselves. (They know *scout* and *porch,* so they can solve *scorch.*) If the teacher does not leave the pupils some words that they can solve by themselves, the pupils do not learn to use their skills of word analysis or to use context clues, and they do not develop independence from the teacher.

At every educational level we have silent reading before oral, and find a purpose for silent reading. The spark that sets off the purpose varies. Sometimes it is the title: "Let's read to find out why the story was called '_____.' " Sometimes it is the background development: "Let's read to see what _____ found out about the different jobs in the radio station." Sometimes it is the teacher's own knowledge of the values in the story: "Let's read this to see how we might make it into a play for tape recording." If we fail to state these varied purposes, the pupils may be unable to alter their reading techniques accordingly. With older pupils we begin to have them define their purposes and discuss how they should read to achieve them.

Providing for Individual Differences. In planning the work for any group, we must recognize that some pupils should finish an assignment sooner than others, that no one should be bored, and that no one should repeatedly have the experience of failing to finish the work. We therefore provide elasticity in the assignment. Everyone will be expected to fulfill the assigned purpose. But some of the additional tasks will be of the type that may take minutes, years, or a lifetime. The teacher may say, "Write about a similar incident that occurred to you," or "What similarities do you see in the two main characters in this story?" Such directives and questions may be answered briefly or at length. Everyone should have the experience of answering such questions for the sake of creative expression, compre-

hension, and interpretation; yet each can do it in a manner that suits the time at his disposal and his pace of work.

Group Work. If, in spite of these provisions, some pupils finish everything early, there should be certain activities for them which they know are always permissible and helpful to their reading growth. There may be a chart in the room listing the activities which are appropriate at this time: reading library books, consulting reference books for something about the author or something about the setting, using exercise material to improve in a particular skill that the individual finds difficult, studying one's own dictionary (or card file or notebook) of words to be remembered, and many other activities.

Sometimes an assignment includes committee work. After silent reading of the story, pupils pair off for the purpose of planning to dramatize a portion of it for the rest of the group in order to reveal elements of character. The rest of the group will be expected to identify the characteristics portrayed and to defend their opinions. At other times pupils will plan questions to ask one another on parts of the story.

After the silent reading the group assembles to discuss its findings. The first order of business is discussion of the original purpose set by the group. Later the additional questions, committee work, and research are given recognition. At higher levels a pupil often serves as chairman, and the teacher acts as a navigator when thought becomes confused or directions are lost.

Here is the opportunity to bring out the best values in the story and to achieve maturity of discussion. If, for instance, the chief emphasis in the story is on consideration for others, we must be sure to probe for this understanding: "How did these characters feel toward each other? What acts or words proved this? Were these desirable attitudes or not? Why or why not?" Having the pupils act out certain parts to illustrate their points or to show how another kind of behavior might have been more desirable may evoke discussions that touch upon the pupils' own living and their own most pressing problems of getting along with others. Individuals find their values challenged, discover that everyone does not live by the same code, and begin to bring a larger understanding to their own problems.

Maturity of discussion means many things, but it certainly cannot be achieved if every answer is addressed to the teacher rather than to the group, if the questions considered are mere matters of fact instead of the larger considerations raised by the main idea and its interpretation, and if superficial thinking is permitted to go unchallenged. If there is pupil interaction, artificiality does not become a barrier to concentration upon a problem. If we treat the larger questions, the facts will come along with them; when we discuss the main idea, the facts have to be presented to support our view.

When the pupils make up their own questions, their first attempts are

discouraging. But perhaps one question will really be thought-provoking. We may say, "Most of the questions you asked today could be answered by a word or phrase or sentence from the story. But Jim's question made us do something else. What was it? Yes, we had to use our heads. Next time let's try to think of questions that will make us express opinions, see relations, and draw conclusions."

During the discussion of the story there are many expressions of opinion and statements of fact from the story. These are opportunities to give practice in purposeful oral reading [18, 26], to establish the habit of proving a point by direct quotation, and to give experience in purposeful listening. "Find the places in the story that prove your point." The pupil skims to find the place, then reads aloud. He reads expressively because he wants to convince his audience that he is right. The audience listens, does *not* look at the same place in the book while he reads aloud. Then the teacher says, "Do the rest of you agree?" and gets reactions from the group. If the teacher does not rely on the group for this approval or disapproval, the group does not feel responsible and the reader feels less motivated to read effectively. This means that when the teacher nods his head vigorously and says, "That's right," he is robbing the group of its responsibility.

This discussion may take more than one day, but whenever it does end, there should be some plan for obtaining additional information and creative interpretation that involves language, dance, music, or art—over a period of time, a variety of expressive activities. If creative expression does not follow, the learnings from the story will be less impressive and some misinterpretations will go undetected. The puppet show, the panel discussion, the dramatization, the storytelling—all can be presented to the whole class so that all may enjoy the fruits of the group labor.

In some quarters the opinion prevails that retarded readers should have more oral reading (especially of the purposeless variety) and little or no "waste of time" on creative expression. This is a good recipe for making slow readers slower and meaningless reading more meaningless. "But how shall we check on the words they don't know if we don't have them read them aloud?" teachers ask. The answer is twofold: (1) A moderate amount of oral reading as described above will reveal inaccuracies, as will a discussion of the answers to a variety of questions such as we have proposed; (2) there is provision in the reading lesson for a review of important new words that are infrequently used.

Skill-building Program. After the discussion of the ideas in the story comes the skill-building program. This program is designed to extend the pupils' mastery of vocabulary, word analysis techniques, comprehension, study skills, and oral and silent reading.

As the pupil learns to know on sight several words that illustrate a certain structural or phonetic principle (ex*port,* im*port,* re*port*ed, *port*able; *sch*ool, *sch*ooner, *sch*eme, and *Sch*enectady), the teacher uses his knowledge

of these words to elicit the principle. "Who can think of a word that has the same common part in it as *porter, important, report?*" When the pupils show by their suggestions that they *hear the sound,* the teacher writes their suggestions on the blackboard in a list. Then he asks, "What do you notice that is alike in all of these words?" A pupil underlines the common part, *port,* in each word. "Let's pronounce the words again in unison and listen for the common part: *export, import, reported, portable.* Now I shall write a sentence using a word that is built like these. See whether you can read the sentence, and be ready to tell how you knew the identity of the word." The teacher writes: "The news reporter wrote the story." The pupils know all of the words in the sentence except *reporter.* They explain that they recognize it because of the context (somebody who writes stories for news) and because of structure (common prefix, *re-;* common suffix, *-er;* and root, *port,* as in *export, import, reported,* and *portable*).

This kind of presentation works because the teacher takes his cues from the pupils. He knows they know the words on sight; he makes sure they hear the likeness in the words; he then makes sure they see the likeness and gets them to say what is alike in all; and then he has them prove that they can use their new learning in solving a new word. The pupils themselves make the discoveries and show by each discovery that they are ready for the next step. This is quite different from showing the pupil the common element by underlining it or printing it in a different color of ink or chalk. In this latter case the discovery is the printer's, and there is no assurance that the pupil will be able to see this part as an entity when the printer stops presenting it in a special color.

Comprehension exercises include such activities as supplying a missing word to complete the meaning of a sentence; identifying a word that spoils the meaning of a sentence or paragraph; discussing the contribution that each part of a sentence makes to the meaning of the whole; finding the main idea of paragraphs of different structure; expressing the main idea of a paragraph in which the main thought is not expressed in so many words; deciding what a sentence does to promote the thought of a story; and drawing an accurate picture of the scene described (see Chapter 17).

BALANCE IN ORGANIZATION

A good reading program presents to the pupil a balance of reading experiences. We must guard against overemphasizing one aspect of reading at the expense of other aspects. Too much oral reading reduces the speed of silent reading. Too much word analysis without an increasing stock of sight words induces slow, labored, meaningless reading. Too much drill on words alone cripples comprehension. Too much freedom of activity in the reading program, such as letting a child read anything he likes for a

semester without instruction or guidance, means the neglect of many techniques that make for reading facility and independence.

Ideally, part of the reading diet of a child should be a developmental or basal program in which he is taught the techniques of reading; a second part should be a functional program in which he uses the skills he has learned to read an assignment in the social studies, to read the school paper, to read a science experiment; and a third part should be a recreational-personal program in which he extends and deepens his reading interests in "pleasure reading" and learns more about himself and other people for the improvement of his own living.

A good *basal program* involves the reading of a basal reader, of supplementary readers, and of related stories in trade books and related reference materials; the reading of newspapers and magazines as a way of becoming better acquainted with these media; the reading of factual as well as story-type material; the reading of all types of literature. It includes audio-visual aids where these can be helpful. It provides for the building of specific skills through manual and workbook exercises; additional devices are provided by the teacher when his pupils show need for further work on a skill. The emphases on each of these three features will vary with the different learning patterns of each child.

The *functional reading program* also includes the reading of magazines and newspapers, stories and articles written by the student or his schoolmates, and reference books and materials. The reading of charts, maps, and graphs can no more be taken for granted than the reading of anything else. These skills are best taught when they are needed, and best understood when the pupil is having a creative experience. If he makes a chart of the growth of a plant he is raising, he learns better how to read a chart made by someone else. If he has drawn a map of territory he knows, and has learned to use symbols to represent the objects and facts he knows, he is better able to interpret those symbols on a commercial map.

When it is impossible to obtain social studies materials and other supplementary books to suit every child, certain adjustments can be made. For example, one teacher let the students who could read the science materials tell what they knew to the others who could not read them. After the discussion the students who had listened dictated or wrote what they had learned. The teacher wrote difficult words on the chalkboard and illustrated them with simple line drawings. Each of these students then made his own science booklet, on the left page drawing and labeling the hard concepts and on the right page writing a simple version of the lesson. Each student learned to read his own booklet and acquired some new words which would in time help him to read science magazines and books.

Reference materials require familiarity with the alphabet and ability to anticipate the different headings under which one topic may be listed.

Again, the creative approach is helpful: pupils culminating the study of a certain topic may make a booklet of their findings and prepare a table of contents and an index to go with it. But whenever pupils are about to explore books or libraries for material they need, then is the time for teaching the use of these tools. If we divorce these learnings from the situation which creates a need for them, we are being about as effective as the teacher who sets aside fifteen minutes a week for a period of morals and manners.

What is balance in the *recreational-personal reading program?* If there is balance in the program, the pupil who enters our class wanting to read about nothing but baseball comes out at the end of the year appreciating a few other subjects, too. A pupil who reads only one author in sixty-six volumes winds up closer to reading thirty-six authors in one volume apiece. A pupil who reads only for plot learns gradually the characteristics of a good plot as opposed to a poor one. Gradually, too, he learns to observe more than plot, to appreciate good writing, and to evaluate the ideas he meets in books. He becomes conscious of the way the author manipulates the reader's feelings and thoughts, bringing a tear to the eye of the unwilling sentimentalist and persuading the mind through the emotions. The 100 per cent detective-story reader becomes occasionally the reader of other literary forms. The fellow who thinks that reading anything except directions for making model airplanes is a silly waste of time finds something worthwhile in stories about aviators. The pupil who shied away from the library finds himself looking up an author in the card catalogue to see whether he wrote something else as good as the book he just read.

These things happen if we make reading guidance our business and are sensitive to the human values with which we are dealing. If we put up a poster listing the names of the pupils and the number of books they have read, those who already do read a great deal become filled with a false pride and those who do not read much are discouraged by the competition. Furthermore, and probably more important, the emphasis is upon the wrong things—numbers of books and competition. If, instead, we have posters and card files advertising and recommending books we have enjoyed, if we have a sharing time for telling about them, if we welcome puppet shows, panel discussions, and film slides by people who have read and liked the same book, a more wholesome type of motivation is developed. In addition, if we show motion pictures of books, tie the children's reading to current happenings, and read stories to the class, we make books an important part of living.

Children are keenly interested in learning how to function in society, and are often deeply troubled about their role in the family, in the gang, etc. Sometimes books can shed light on their problems. Then their discussion becomes problem-centered rather than entertainment-centered; they come to understand their own situations better by talking them out ob-

jectively as the problems of the book characters. Of course, we cannot pre-
scribe books like pills, but we can guide pupils to read certain books when
we are aware of their need and when we feel these books might help with
the answers. To give them access to help is the least we can do.

The recreational-personal reading program, then, is a balance of all of
these elements. Its purpose is to meet the current needs and interests of
young people and to develop a lifelong reading habit.

GROUPING WITHIN A CLASS

One of the reading teacher's major problems is that of grouping for
instruction. Grouping is a problem because it is difficult to do and it is
widely misunderstood. The few teachers who have fled into a largely indi-
vidualized program have done it in protest against a narrow conception of
grouping—grouping as a process of slicing a class into three equal parts
and keeping the children separate from that time forth. Even worse things
have probably been done. For instance, the author of this chapter heard
only the other day of a new teacher who had divided his class into three
equal parts and then given all the same book to read.

In every good reading classroom there are six types of grouping. They
are carried on all the time and the teacher is always conscious of them;
he loses no opportunity to bring them into play when they serve his pur-
poses.

Achievement Grouping. The first type is achievement grouping. It is
based on the difficulty of the material with which a pupil is fairly com-
fortable but from which he is learning.

To determine this level, the teacher can look at the records the previous
teacher kept of the child's reading. If he finds that the pupil finished the
fourth reader last June, he can hope that he is ready for the fifth reader
this September. But he has to remember that a summer of goodness-knows-
what has intervened. Maybe the pupil read all summer, maybe he swam in
the lake. In the latter case, he will make no great splash in reading in
September, though he may bring a load of carefree concepts with him to
enrich the meaning of what he reads.

The teacher may ask him what he has read during the summer. A
comparison of his leisure-reading level with his record of last June may
suggest progress or it may not. Ordinarily, people choose to read material
that demands less than their maximum effort. If he has been reading books
that are harder than the book he finished last June, it looks like real
progress.

The teacher may then fill a large table with books having varied titles
and various difficulty levels, and ask the pupils to choose a book they
would like to read and can read, to read it silently, and to be ready to
read aloud a portion to him when he asks for it. Ernest may choose a

hard book to impress the teacher. When he is asked how he likes it, Ernest will say, "Well, it's too easy," or, "It wasn't very interesting." But when he reads aloud, he stumbles over every word. The teacher says, "Maybe this would be a better book for you to read to me," and gives him an easier one. He gives him time to read a bit to himself before asking him to read aloud. By this process the teacher whittles him down to size, finding the level at which he reads easily and can discuss what he has read.

Martin, on the other hand, says to himself, "If I pick a hard book, I'll be stuck with the top reading group all year"; so he chooses an easy book. When the teacher asks what his book is about, he gives a stenographic report of it, and when he reads aloud he sounds like a radio news reporter racing with time. The teacher selects a harder book and by this process finds the level at which Martin encounters some challenge but can still read with comfort and understanding.

By this method the teacher decides upon the reading level at which the different children will be comfortable. The higher the grade he teaches, the greater the difference between Ernest and Martin. He may still question his judgment, however, and his placement of pupils. If so, he gives a reading test which has vocabulary and comprehension sections, both of which start with easy items and go up to hard items. He sees what happens to each pupil in the test. Some of us make the mistake at this point of using the total score on the test to determine placement. But the teacher we have selected to tell about notes the hardest vocabulary and comprehension items the pupil was able to do, and compares them with his reader series. In what book in the reader series do these words occur; in what books are the sentences as long and involved, the ideas as complex and mature?

The teacher then tries to put the children into several groups. Sometimes a new teacher starts with two groups and adds other groups as he feels able. Most teachers feel that three groups an hour are about all that can be efficiently handled. Decisions about grouping are difficult. For it is hard to know whether to put a borderline pupil into a higher reading level where he will be uncomfortable or into a lower reading level where he will have an easy time of it.

The fact is that the teacher will always have some individuals in any group who do the work easily, some who find it hard, and some who find it just right. A second fact is that he will find he has made mistakes and that pupils change during a year, some exceeding expectations, others falling by the wayside. He will have to change the placement of any pupil whenever he feels he would be better suited to the work at another level. In other words, his achievement grouping must be flexible, and his diagnosis of pupil status and needs must be continuous. Achievement grouping is

designed to promote the reading skills of the learner at a level congenial to his growth.

Achievement grouping helps us to sell the idea that a child who is doing his best and is progressing is the most desirable kind of school performer, whether he is at the top of the class or at the bottom. But in addition, something must change inside some of us teachers so that our faces don't brighten when we work with the high group, straighten when we work with the middle group, and sag when we work with the low group. In many little ways we reveal to the children our respect for them or our lack of it; if we show that we are disappointed in them, we impose a heavy additional burden on them in their struggle to learn to read. Actually, we are disappointed in our own failure to reach our own goals. We shall achieve psychological peace with ourselves and our pupils only if we wisely suit our goals to the different paces possible for the different groups and the different individuals within these groups. Then we shall have the satisfaction of achieving our goals, and the children will get satisfaction from having kept us happy while they learned.

"Research" Grouping. In reading "research" grouping occurs when two or more pupils decide that they are curious enough about a certain question to investigate it in books and to report their findings to their reading group or to the entire class, as the case may be. It may occur in connection with some happening in the community (a political campaign, a strike, Christmas celebrations, Red Cross drive, Lincoln's birthday), with something of interest that a pupil brings in (a souvenir from an uncle in the Army, a strange butterfly, a clipping about a new, high-speed airplane), with a new movie or television program. It may stem from a schoolwide activity, such as a paper sale, which rouses the pupils to inquire where paper goes and what is done with it. Such happy accidents give the pupils opportunities to exercise and maintain the skills already initiated in the basal reading program.

"Research" grouping may also occur in connection with regular classroom activities: the study of parliamentary procedure for class meetings, or study in a subject area such as the social studies. Suppose, for instance, the social studies topic is "Communication," and the class decides to pursue this study through committees which will investigate various aspects of the problem. They plan what committees they will have and what questions each committee will attempt to answer. Then individuals choose the committees they wish to be on. They may decide upon many ways of getting their information, such as interviews, films, recordings, visits to radio stations, etc.; but part of their information will be obtained by visiting a library, and writing requests for pamphlets and other information. Perhaps some material is assembled in the classroom for committee use.

In this situation the pupil's choice of a group depends largely upon two factors: What is he most interested in studying? With whom does he prefer to work? In other words, common interests may cause two pupils to work together and learn to like or dislike each other, or social preferences may lead a pupil to study something in which he is not initially interested but which he may find he likes or dislikes. In either case there is the possibility of broadening his experience and scope of interest, whether it be social or informational. Needless to say, it is the teacher's job to see that the committees work after they are formed, to keep friends working on the topic, and to help those who are thrown together by a common interest to surmount the difficulties of cooperation. Well-defined objectives and frequent checking on progress assist the former; and teacher arbitration at points of difficulty or, better, anticipation of difficulty by establishing the ground rules well in advance, assist the latter.

A variety of material must be on hand so that everyone has a reading experience. Some difficult crucial material may be read aloud to the committee by the best reader in the group. Then the pupils pool their findings and decide upon the best manner for presentation to the rest of the class.

This type of grouping is important for many reasons. But from the reading standpoint it is especially valuable as an exercise of the pupil's ability to use reference tools, to adjust his reading techniques to his purposes, to utilize word attack skills, and to put material from different sources together into a meaningful, well-organized whole.

Interest Grouping. Perhaps it is splitting hairs to suggest that research grouping and interest grouping are not necessarily the same thing. This is a type of grouping which stems from an interest a pupil pursues in books as well as in hobbies and other life activities. Take the cowboy interest, for instance. The teacher provides a display of good cowboy stories on the library table or shelf, puts cowboy book jackets on the bulletin board, puts cowboy music into his music program. Western adventure is an interest which can persist through adult life and needs to be recognized at all levels. Now, suppose this prairie malady strikes two or more pupils. The teacher finds them in the corner recommending cowboy books to each other. "How would you fellows like to tell the rest of us about the cowboy books you think we'd like especially?"

At a subsequent meeting of the class reading club—everybody belongs, and it meets at least once a week to spread interest—the boys form a panel to tell about the book; perhaps to read good parts aloud; to show movies or slides, pictures from books, or pictures or models they have made; to dramatize parts; or to demonstrate cowboy techniques. Perhaps they go on to make a poster advertising the best stories or a scrapbook of some of the things they have learned. Perhaps they write a report for the class-

room newspaper, bulletin board, or school newspaper, appending their bibliography.

Sometimes the teacher is made aware of a mutuality of interests when he puts up an order blank: pupils' names down the left side and space for topics at the right. "Next time we get books from the library, what would you like particularly to read about? Write the topic opposite your name so that the librarian can be hunting some good books for you." In this way the teacher can locate books that are appropriate in both topic and reading level, and discover which pupils might think and work together a bit on a mutual interest.

Notice, as in research grouping, that common interest may cause relative strangers to work together, or that Harvey may attract his friend Wayne to read books on a topic that is new to Wayne. It is through practice that reading skills are maintained, and it is enjoyment—the satisfaction of curiosity or emotional release—that keeps pupils reading. Grouping based upon interest fans the flame.

Special Needs Grouping. Special needs grouping has a skill-building connotation. It may occur when a pupil has been unready or absent in body or mind when a certain skill was taught in his achievement group. The teacher has noticed his deficiency in this skill either in his daily performance or in diagnostic tests. When another achievement group is going to deal with this same skill, he invites the pupil to join it. The pupil is with the group for the duration of the exercise, participates in it, and takes away some type of assignment which provides additional practice and shows whether or what he has learned. This has not required the formation of a special group; yet the need has perhaps been satisfied.

Let us imagine a different situation. The teacher notices that two people in one achievement group, one person in another, and three in a third, all have the same difficulty—perhaps reading for the main idea or analyzing a word by its initial consonant blend. He does not wish to bore every group with an exercise in this skill because none of the other pupils need it. So he cuts five or ten minutes off the reading lessons that day and has these six people come to the chalkboard or table to develop a better grasp of this skill.

He uses words or material that is appropriate to the lowest-level reader in this special needs group. In other words, if the pupils represent fourth-, sixth-, and seventh-reader levels, he couches his instruction in an easy fourth-reader vocabulary, which the poorest reader in the group can recognize on sight. He does this because he knows that one cannot learn an unknown through an unknown. If you were told that a "splinkx" is a form of "lapxkz," you would be no further along in your understanding of "splinkx." If the technique is strange, at least the vocabulary and the ideas should be familiar.

The teacher may meet the special needs group once or several times, as few or as many times as are necessary to learn the skill; and each lesson will be followed by individual work by the children at their seats to improve their prowess.

Team Grouping. Sometimes, in the face of a difficult task, two pupils have one good head between them and profit by working together. We know that a student should often prove by solo flights that he can navigate the skills without help. But he does learn from others and can, occasionally, benefit by having a fellow sufferer with him. What he doesn't know, the other fellow may know. What neither fellow has the courage to decide alone, together they may decide.

Such a group may be the informal recommendation of the teacher as the achievement group leaves for individual work. "Why don't you and Tom work it out together this time?" Or a pupil may ask, "May we work together on this?" After the meeting of a special needs group, the pupils may be encouraged to pair off to work on the follow-up assignment. The teacher does not force a team situation. If he knows two pupils to be friends, he may recommend teamwork. If he knows that they are very uncongenial, he may feel that this unsupervised situation is not one which will help them learn to value each other's virtues.

To be successful, a team must have a definite job to do and know exactly what is expected. A concrete result—such as a written report or filled-in blanks—and a reasonable but not too generous time limit will keep the partners down to business. They will consider teamwork a privilege which can be lost by horseplay, regardless of the original equine application of the word *team*.

Tutorial Grouping. The situation in which one pupil who knows a certain skill or piece of material helps one or more pupils who do not know and are trying to learn—sometimes called tutorial grouping—has been much debated as a technique of providing for individual needs. Some say it wastes the time of the pupil who knows. They add, "What's the teacher for?" Others point out that help from another pupil is degradation to the helped; it classifies the know's and the don't-know's and throws them together to the embarrassment of the latter. "Besides," they say, "it gives delusions of grandeur to the helper." On the other hand, young people fitting themselves for our present society must learn to be gracious helpers and to receive help graciously. Everyone needs to learn both roles. If we have Martin help Ernest, we want to arrange a time when Ernest gets to explain something to Martin, even if we have to prepare for the occasion by holding secret intelligence meetings with Ernest.

As teachers we all know that we understand better the things we have had to teach. Martin reinforces his learnings by teaching them. He will spend his whole life explaining his ideas to other people. If education is preparation for life, he can learn now to get along with different kinds

of people. So Martin's teaching time benefits him, while it releases the teacher for instructional tasks which only he can perform. Thus tutorial grouping serves a teaching purpose and a social need.

In this type of grouping, as well as in several others, the tasks must be definite and the outcome concrete. Martin must know how to help—that help does not mean telling the answers—and Ernest must know what help to expect and what his own role is.

PARENTS AS PARTNERS

A school reading program can stand or fall on parental understanding and cooperation. In fact, reading is not an in-school program. A lot depends on what happens outside the school. Do the parents show impatience or dissatisfaction with the child's progress? Do they show lack of faith in the school? Do they provide activities which enlarge the child's experiences and vocabulary? Do they answer the child's questions? Do they themselves read? Do they provide adequate nourishment, rest, and love?

Does the school help the parent understand what is happening to the child in school? Does it let the parent know how he can help? An increasing number of pamphlets and books are now available to help the teacher orient the parent and help the parent orient himself (see Appendix C).

There are many things we still need to learn about efficiency in the reading program. The fact that boys and girls read as well as they do is probably a great tribute to human intelligence. But, little by little, we are learning to teach reading in a manner suitable to the development of citizens in a democracy. No one is more responsible for the future of this country than the teacher who guides his pupils to think as they read, to evaluate ideas, and to act upon their decisions.

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CHAPTER 10

Special Reading Groups

"In my ninth-grade English class where (a) the pupils range from the well-read to nonreaders who cannot recognize as many as twenty-five words, (b) the subject matter is far too extensive, and (c) much of the material in the textbooks is beyond the pupils' comprehension, what would be your step-by-step procedure in setting up an efficient reading program?"

Whether to form special reading groups—that is the first question. And the answer depends on conditions in the particular school or college. If the regular classes are small, if the teachers are skillful in grouping students within their classes for instructional purposes, if they can provide suitable reading material and experiences for all, then special reading groups are not needed. If, on the other hand, classes are large, if rigid grade standards are maintained, if teachers let the poor readers just sit and do busy work and the able learners languish in idleness, if the range of reading materials and equipment is too narrow to meet varied needs, and if the students cannot read well enough to profit by the regular class work—then a need for special groups is indicated. In other words, if the teachers cannot, in regular classes, give all the students the stimulation, instruction, and practice they need, then special groups should be formed.

However, since individual patterns of skills and needs are so different, even among students who make similar scores on reading tests, it is impossible to achieve completely homogeneous grouping. For this reason, more and more attention is being given to devising ways of meeting a wide range of needs in regular classes and in developmental reading courses for all students.

PREVENTION FIRST

More emphasis should be put on effective developmental reading, and less on remediation. Kottmeyer [19, 20] suggests the following ways to reduce the number of retarded readers:

1. Establish readiness before introducing formal reading instruction.
2. Correct physical and sensory handicaps.
3. Continue to experiment with ungraded primary schools in which the objective is the "continuous growth of the individual child" [15, p. 678].
4. Teach the basic reading skills in the sequence in which they are best mastered by children (see Chapter 4). It is especially important that pupils be in possession of fundamental word recognition skills and a sight vocabulary of approximately three thousand words by the end of the primary grades.
5. In the intermediate grades, continue systematic instruction in word recognition skills, especially structural analysis and syllabication; extend and strengthen word study and locational skills, and provide daily occasions to use them.
6. In secondary school, provide guidance and instruction in the kinds of reading that are important in each subject field.
7. Encourage voluntary reading and use of the public library.

KINDS OF READING GROUPS

The special reading group should be viewed in the framework of the total school program. For teachers who are unable to individualize instruction in heterogeneous classes, it is desirable to group students according to reading level. This can best be done in a large school. It tends to reduce variability in achievement [12] and has been reported to be more efficient than within-class grouping in third- and fourth-grade classes [1]. Some school systems that originally sectioned the students of a given grade into as many as twelve reading levels now draw off only the very able learners and the seriously retarded readers; the others are taught in heterogeneous groups.

In both high school and college the best plan seems to be to provide *regularly scheduled time* in the freshman program for improvement in reading. Those who need special instruction and practice may spend this time in the special reading classes. Those who are already proficient may use the time for voluntary reading in new fields or more intensive exploration of familiar fields. Having this regularly scheduled time for all students has several advantages: it avoids putting pressure on students who would be overburdened by an extra period of reading instruction; it makes attention to the improvement of reading a requirement for all students; it gives status to reading among both students and faculty.

Special English classes for retarded readers may concentrate on reading skills, while at the same time covering the main content of the English course of study for their grade.

The extra required course without credit has helped many retarded readers. But it puts an additional burden on students whose program is already too heavy. When credit is given, the reading work then becomes a substitute for some other course the student would be taking. Kipp [18] reported positive changes in the reading-test scores of seventy out of eighty-four students who took such a course.

An elective course in reading is open to all students. Many average and superior readers take the course to increase their reading efficiency. When the teaching staff is limited, selection of students is often made on the basis of potentiality for improvement. Students who request special help are likely to be strongly motivated and they may also stimulate others to improve their reading. Able learners especially enjoy a period of free reading and discussion; they are also likely to profit by instruction in critical reading and the deeper appreciation of literature.

A practice-type unit on reading in an English or homeroom period or in an orientation course may produce improvement in reading over and above that produced by the usual class instruction [21].

Reading clubs take various forms. In one club the purpose was to enjoy a story, article, or play that was read aloud. Sometimes the students read; sometimes the sponsor. The members did considerable silent reading outside the club period to find selections to present and to finish stories that were not completed in the period. Somewhat more serious in its purpose was a college international-relations club. The members were either majoring in social science or keenly interested in that field. The books on current events that they read during the year were later presented to the library. Another book club composed of about fifty college freshmen and sophomores, all interested in books, met every two weeks in the home of the English professor and his wife. At each meeting members reported on three or four books, usually of current interest. The students enjoyed the friendly home atmosphere and the opportunity to become better acquainted with faculty members. The club created an interest in reading for pleasure and for information.

Classes for the mentally retarded present reading as one avenue of learning.

Summer session groups for retarded readers are becoming more common. Kinloch [17] reported that second-grade pupils who did guided work in reading during the summer gained two months, whereas the control group lost two months.

The summer reading schools that are connected with colleges or universities often present opportunities for teacher education. Teachers who participate in a summer program often carry back to their classes a new en-

thusiasm and a desire to improve their daily teaching and to share their know-how with other members of the staff. They may also enlighten the principal!

The need for help in reading is indicated by the eagerness with which many students take advantage of offers of help. Even when the school day is lengthened and no grades are given, there is a great demand for a course in Reading Enrichment [40]. The special features of this course were the informal encouraging atmosphere and lack of required reading and reports, the individual help given to meet the needs of students, and a close tie-up between the reading class and the other subjects. Students could bring their textbooks to the reading class, and if the text was too difficult, the teacher would try to find another book dealing with the same topic. Many important outcomes were observed by the teacher or reported by the student—reduction of anxiety in reading aloud, increase in voluntary reading, and improvement in class work.

REFERRAL TO SPECIAL CLASSES

Every member of the school staff should be careful not to attach any stigma to membership in the special reading group. The morale of the poor reader is usually low enough already without our increasing his sense of inferiority by segregating him in a class labeled "remedial reading." For this reason honorific names like "reading club," "reading homeroom," "special English," or "reading laboratory" should be used to designate the special class for retarded readers; and the class should live up to its name. The special reading class should never become a dumping ground for the school's unwanted disciplinary problems.

Teachers should present the reading class to students as an opportunity to get the most out of their high school and college years. In these days of speed and efficiency students do not want to lag behind in the horse-and-buggy stage of reading. The special group will help them to attack their immediate study and reading problems more effectively and thus gain time for other activities.

The attitude of students toward the special reading group also depends on the experience of previous members of the class and the attitude of the teachers toward the work. Students who have been happy and success-ful in the special reading group spread the idea through the school that being in the reading class is a privilege. Teachers, too, by favorable com-ments may make students feel that it is a privilege to be in the class. A waiting list reinforces this feeling. One boy asked to be enrolled in "the immediate reading class." The way the class is described to the students in their first meeting is also important. In the small English classes in South Philadelphia High School for Girls, the reading teachers used to tell the students truthfully, "You have been chosen for this small English

class because you have average or above-average ability; you are not working up to your ability; you can profit by this special instruction."

FORMING THE GROUPS

Reading classes vary in size from less than five to more than five hundred. A class may be too small for optimum interaction among its members. On the other hand, it may be too large to allow for individualization of instruction. Although something can be accomplished in classes of any size, the most effective instruction can probably be given in groups of from ten to twenty students, or a combination of large groups and individual contacts.

With individualized instruction the student may remain in the special reading group until he has acquired the desired proficiency. He is graduated from the class when he has achieved his goal.

When the reading instruction is substituted for a regular class, the group usually meets three to five times a week for the entire semester. When a special class is introduced, the time is frequently limited to one or two periods a week, sometimes with an additional individual conference period. Seriously retarded readers need instruction that has day-by-day continuity.

When scheduling special reading groups, one should be cautious about interfering with students' other activities. The special reading groups should not supplant classes which the students particularly enjoy. It is also best not to take students out of their regular classes. There are two reasons for this: the regular teachers sometimes resent it, and the students may miss instruction that they need. Nor should reading classes be held after school if this deprives students of their recreation or valuable part-time work experiences.

As to the composition of reading groups, it is important to place a student in a group with others whom he has chosen, to balance aggressive and submissive personalities, and to have some specially articulate members in each group who can stimulate discussion. These are some of the factors that should be considered in forming small groups. Whitney [41] developed a procedure by which students chose the groups they wanted to be in. He described to the students three types of groups:

Group I will go to the library for independent reading. To join this group you should be a good reader and a responsible person who can set reading goals for himself and work toward them with very little help from the librarian or teacher.

Group II is best for those who want to improve their reading skills and would work on practice exercises for this purpose.

Group III is an opportunity for pupils who have lost out somewhere in their school years in learning to read and need special instruction in basic

vocabulary, word recognition, and sentence and paragraph reading so they will be "on their own in reading" and be able to gain ideas from the books they are expected to read.

More commonly, students are selected for remedial classes because they are one or more years retarded in grade placement, because their mental age is greater than their reading age, because their school marks are below expectation, or because their teachers recognize that they need special help. Our present knowledge does not seem to justify more elaborate diagnosis or placement based on different types of reading disabilities [31].

BASIC PROCEDURES IN READING CLASSES

Although the forming of the special group has involved some preliminary diagnostic work, the teacher should continue to study its members and should help them to study themselves. All this should form part of the process of instruction. Informal diagnostic procedures are described in Chapter 14.

Self-appraisal. Various forms of self-appraisal should be encouraged. Students can take initiative and responsibility for analyzing their reading needs and difficulties, as in the following introspective report, written by a gifted college student:

My main reason for taking this course in the improvement of reading is to speed up my reading rate. Probably one thing which retards it is the fact that I find it difficult to concentrate on the reading matter before me. Therefore, if this course can increase my power of concentration, it will undoubtedly help speed up my reading rate. My fastest rate, when I concentrate as well as I know how, is twenty pages an hour of the average book. Tests do not show up my deficiency because, first of all, tests introduce a special situation in which I am under pressure. I always do anything more efficiently under pressure than when I am left to myself. Secondly, tests usually give short reading passages. . . . With a short passage there is, you see, no problem of concentration, whereas concentration can become a problem when one has several pages to read at a sitting.
Another aspect of my problem is, I think, that I have only one reading method, the intensive reading method. I suppose that I should have at least two reading methods, the intensive and the extensive. . . . One reason for my difficulty in concentrating is the fact that I have an imagination which is too active. As I read along in a novel, for instance, I come across a word or a phrase which recalls something in my past experience. I stop to enjoy that sensation and usually the recalled experience will remind me of something else and so on *ad infinitum*. Thus my creative imagination makes of the book a sort of instigator of a series of pleasant, or sometimes unpleasant, memories. This sort of creative or re-creative reading is pleasant, but it uses up precious time when it intrudes into all my reading. And, in extreme cases, it slows up my reading to such an extent that by the time I reach the end I have forgotten the beginning of the book.

Group Planning. Once they have recognized their needs, the students can make plans for improvement, using the reading teacher as a resource and consultant.

One special reading class, which met five days a week, decided on the following weekly program: On the first two days the periods were spent in free reading. During these periods the teacher had conferences with individual pupils about their individual reading programs and problems. She helped them with their specific reading difficulties. On the third day the period was spent in group discussion or panel discussions of the books they had read. On the fourth day the pupils participated in a "work period," in which they practiced as a group or individually to increase the effectiveness of their reading. If a common problem was recognized, such as an unnecessarily slow habit of reading, the class did timed exercises using different kinds of material and reading for different purposes. They particularly enjoyed this kind of exercise: "You have only five minutes to get the most important news in the daily paper. See how many important facts you can obtain." After the reading, the pupils listed the facts they had obtained and made a composite list. They asked classmates who had done exceptionally well to tell how they had managed to get so much information in so short a time. Variations of this exercise were worded thus: "You have two minutes to find out on page 10 what the critics think of the new play—or movie." "A friend just phoned that she will be ten minutes late. What ideas can you get from this article while you are waiting?"

Sometimes they worked individually on books or practice materials dealing with the skills they needed. For example, college-preparatory students who were especially interested in the reading process used the *Study Type of Reading Exercises* [37]. Those who needed help in grammar and composition used a workbook such as *Thinking in English* [36]. For several who were addicted to the comics, the *Superman Workbook* [38] served as a starting point.

The pupils decided to leave the last period of the week open for unfinished activities or some reading experience of immediate interest to them. In this program reading takes its rightful place as a means to an end—reading to learn, reading to understand ourselves and others, reading to have experiences to share, reading efficiently so as to have more time for other activities.

Another group of students who were reluctant to read talked about their hobbies, leisure activities, adjustment to the new school, and vocational plans until they themselves became tired of this rather aimless use of time and began to say, "I thought this was a reading class. When do we begin to read?" Thus the demand came from the group. They began to talk about why people read and "what reading means to me." They thought it would be a good idea to take a test and grade it themselves so that they could find out what their reading problems were. The teacher helped them develop their program as it gained momentum.

Another group in which most of the students were resistant to reading spent their first period making the room more attractive and building bookcases out of crates and boxes. They next decided what books they would like to have for their class library. This involved reading reviews for suggestions, and then reading the books thus selected. To increase the attractiveness of their room, they obtained discarded posters each month from a publishing house. From these posters they learned new words and became interested in some of the books advertised.

Reading Growing Out of Experiences. A gifted young teacher [13] was discouraged by her first experience in teaching English to ninth-grade pupils who were totally unable to comprehend the books required by the state-prescribed course of study. They were in a fog that showed no sign of lifting. These pupils were from homes where there was little opportunity for reading and little interest in it. Most of them had never read a book voluntarily. In talking with the pupils about their interests, she learned that they liked to read about the adventures of persons like themselves. Why not, then, begin reading about their own experiences? The next day they were to come to class prepared to tell the most exciting and interesting experiences they had had during the summer. These accounts were taken down in shorthand by a senior commercial pupil, typed, and returned to the ninth-grade youngsters. After editing their stories, they had them retyped and bound into a little booklet of easy, interesting reading material. Two of these "stories" will give an idea of their content, vocabulary, and sentence structure:

One night my sister and I were walking home from a party. We saw shadows. They weren't ours. Someone was following us. My sister turned around and saw the shadow in back of us, but she could not see whose shadow it was. We started to run; the shadow started to run, too. We ran the rest of the way home and hurried into the house and told my mother. While we were talking, the kitchen door opened, and in walked a man—my father!

I had a dream Friday night. Friday afternoon we had a test about bugs. I didn't know how many legs a spider had, and Mr. Masters told me I had better find out. That night I was sleeping and all of a sudden I thought that a spider was being let down from the ceiling on a string. It stretched its legs out as if trying to grasp hold of someone. It kept coming closer and closer until it grabbed me. I let out one yell and my sister came running in to see what was the matter. I told her there was a giant spider in the room, but she wouldn't believe me. She had to turn on the light to convince me that it was only a dream.

Their next interest was in making books of travel. Each pupil decided upon some place that he would like to visit and obtained pictures and information from a great many sources including library books, copies of the *National Geographic Magazine,* etc. The project involved writing letters to travel agencies, reading magazines and books about the country

they chose, and writing a day-by-day imaginary account of what they did and saw. Each of these travel diaries served as reading material for the other youngsters as well.

Another activity that led to reading was visits to places of historic interest in the vicinity. The town librarian supplied a number of books on local history, and one of the youngsters was thrilled to find a picture of his own house in one of the library books. These reading experiences, growing out of pupil-initiated activities, were followed by practice in the reading of assignments for other classes. Information and skill gained in the reading class enabled the pupils to discuss questions in their other classes with a success that they had never before experienced.

At the end of the year the pupil showed gains in their reading scores and, even more important, improvement in their attitude toward reading. In the words of one pupil, "I enjoy reading now because when I get through I know what I have been reading about, instead of being in a fog."

A class newspaper is a popular activity that stimulates both reading and writing. Students may contribute accounts of exciting experiences, original tall stories, book reviews, school news, personals, and other items. One boy who had never written any original material discovered an interest in writing poetry. Writing articles for their classmates increases students' appreciation of vocabulary and of sentence and paragraph structure. For retarded readers, these accounts of the experiences of their contemporaries, written in a familiar vocabulary with easy sentence structure, are excellent reading material.

Free Reading Encouraged. Both librarian and teacher are ready to guide individual pupils in their choices, getting clues from them as to their immediate interests and the books they have liked. Later they help pupils find books that fit into a progression of reading experiences for them. During their library periods pupils feel free to read as they please and to share the ideas they have gained from reading in informal conversation. As a result of these free reading and discussion periods pupils begin to think of reading as something they *like* to do rather than as something they *have* to do.

A Place for Practice with Instruction. In the work of the special reading class there is a place for drill, though not the exalted place it once had. Skill-drill courses that depend largely on a single textbook do not offer adequate provision for individual needs and do not integrate the reading skills that are practiced. Nor is there any assurance that the student will transfer his newly acquired skills from the workbook to his other reading. Too frequently the time in special reading classes is spent mainly in practicing and taking tests. Continued practice of poor reading methods reinforces errors. Instruction is necessary. There should be time for discussing the specific reading methods appropriate to the passage before and after each period of practice. For example, students should realize that a quick

preliminary skimming is useful to see (1) what the general structure of the article is, (2) what the author is trying to do, and (3) what questions the article will probably answer. One group did poorly on an informal test of paragraph reading; they clearly needed practice in this skill. First they talked about the kinds of errors they had made, and those who had read a paragraph correctly told the others about the methods they used.

To give the pupils a sense of the way paragraphs are built, the teacher showed the Coronet instructional film, *Writing Better Paragraphs.* Immediately afterward, the pupils wrote paragraphs which they then exchanged and analyzed for main idea and supporting details. Next, each was given an envelope containing the sentences of a well-constructed paragraph typed separately on strips of stiff paper. The pupils did not see the well-constructed paragraph until they had put their sentences together in what they thought was the best order; then they compared their reconstructed paragraphs with those in the envelopes. Occasionally their organization of the sentences, though different from the author's, was just as good. In a paragraph that had both a topic sentence and a summary sentence, either might be used as the first sentence, for example. This practice exercise lends itself well to individualization, since paragraphs of varying difficulty can be used. To meet special needs and interests, the teacher enlisted the help of the pupils in preparing additional practice material. Finally, the pupils read paragraphs from one of their assignments for the next day to get the main ideas and the supporting details or illustrations, and to grasp the relation among the main ideas of several paragraphs. It is also possible to select paragraphs whose content helps certain individuals gain insight into their personal problems, such as father-son relationships.

Students may obtain practice in reading directions by reading and following actual directions. Instead of telling the students what to do at the beginning of each period, the teacher may hand out typed or mimeographed direction sheets or may write the directions on the blackboard.

The reading selection for today, *The Law of Club and Fang,* starts on page 401. The selection has four parts, which fit together like links in a chain. First read the story from beginning to end. Then go over it again to try to decide what the four parts are. Make a brief note about each part to aid you in the discussion that we shall have when the entire class has finished reading. Find the place and begin to read now.

For practice in getting the main idea, students may write headings for articles posted on the bulletin board or headlines for the school newspaper. (For suggestions for practice exercises, see Chapters 16 and 17.)

Skill in interpreting meaning is developed as students read literature aloud, raising and considering questions of interpretation until they become proficient in finding clues to hidden or subtle meanings. Then the students

may read selections silently, using their newly acquired skill to answer thought questions such as, "The author tells you a great many things that the hero did, but he does not tell you in so many words what kind of man he is. What clues have you found to his character?" They will discuss questions like these in the group. Finally they should be able to use their interpretive skills in their independent reading.

Practice is most effective when the students feel a need for it; when the needed skills are thoroughly and systematically taught rather than superficially touched on; and when individual practice is reinforced by social stimulation.

Use of Mechanical Devices. The controversy over machines continues. It flares up noticeably when a school system installs a pressure type of machine that may increase speed of reading without regard for the content of the material or the purpose for which it is read. How can skills and content be separated when reading is a thought-getting process? The content and purpose determine the skills to be used. Although it is desirable to read any material as rapidly as possible while still maintaining the necessary comprehension, many students today read too fast; they skim when they should read thoughtfully, critically, deliberately, creatively. What most of them need to learn is to adjust their speed and method of reading to the particular material and to their purpose in reading it. "Superior reading technique requires not mere speed but a greater flexibility in rate" [11].

Two main kinds of machines are used to improve comprehension— tachistoscopic devices and pressure methods. The chief mechanical tachistoscopic devices now used are flash cards, the flashmeter or near-point or far-point projector, and the motion-picture film. According to Anderson and Dearborn [2], tachistoscopic methods are primarily useful, not for increasing the perception span, which is normally wider than is needed for reading purposes, but rather for improving concentration and quickness in perceiving words and associating them with their meanings. Another possible value of the machine lies in the novelty which it has for students. "Here," they think, "is something new and scientific that will help me learn to read better." This kind of motivation is not to be ignored; it may produce real results.

Beginning with pictures of animals shown by the flashmeter, students may learn to recognize forms in a fraction of a second. They may then progress to numbers, words, phrases, and short sentences. It may be better for the student to begin with an exposure of one hundredth of a second than a longer exposure. A longer exposure may permit the persistence of previously established slow habits. For word-by-word readers, some training in recognizing a phrase in one fixation should help them to decrease vocalization and to learn to read in thought units.

The metronoscope, now no longer on the market, was a machine designed to accomplish the same purpose as the flashmeter but with con-

secutive reading material. A further development of the tachistoscopic idea was the reading film. The best known of these films are the Harvard University Reading Films [1] and the High School Reading Training Films.[2] These films are accompanied by adequate tests of comprehension. For students who have mastered basic skills of word recognition and comprehension, the films have four possible values: (1) to give a mechanical stimulus which focuses attention and aids concentration and the rapid association of words and meanings without vocalization; (2) to give practice in reading in thought units; (3) to promote simultaneous reading and comprehension; and (4) to give students objective evidence that they can read faster—that improvement is possible.

The pressure method may take the simple form of timed reading. Here the time limit serves as a stimulus to concentrate and read faster. Mechanical devices are used for the same purpose. Among the machines of this kind that are now on the market are the SRA Reading Rate Accelerator,[3] the Reading Rate Controller,[4] and the Keystone Reading Pacers.[5]

It is often said that rapid readers get more sense from their reading. This statement is somewhat misleading in that it fails to take into account the nature of the material that is being read. It is not true of difficult material. You can read some kinds of material too rapidly and miss the point. But it is possible through practice to help a slow reader increase his speed and also learn more from his reading.

Machines such as those just described should never be used as the only means of improving reading; they should be fitted into the total reading program as they are needed. In the Chicago adult reading clinic described by Buswell [10], machines were wisely used. Initial and final tests were given and the corrective work was done individually rather than in classes.

The pressure method is particularly appropriate to one type of reader—the reader who comprehends what he reads but has acquired an unnecessarily slow perceptual habit and rate of reading. Such students are often led to increase their reading efficiency by the pressures of college life. If to these demands is added that of remunerative work, the student's need for increasing his reading and study efficiency becomes imperative. Under these conditions some students, without special instruction, have learned to read faster and still maintain the necessary comprehension. Others, however, need the immediate stimulus of mechanical devices like those described.

This so-called pressure method would not be appropriate for an individual whose experience has been limited and who needs "a broad educa-

[1] Harvard University Press, Cambridge, Mass., 1949.
[2] State University of Iowa, Iowa City, Iowa, 1951.
[3] Science Research Associates, Inc., Chicago.
[4] Stereo Optical Company, Chicago.
[5] Keystone View Company, Meadville, Pa.

tion with stimulating ideas to motivate interest in reading" [10, p. 252]. Nor would it be appropriate for a student whose basic difficulty is in comprehension and critical thinking, nor for one whose slow rate of reading is a symptom of some underlying emotional difficulty. Too often reading-training devices are introduced without adequate diagnosis of the students' reading difficulty.

Any of these machines can be helpful in shaking a person out of unnecessarily slow habits of reading. A really good gadget in its proper supplementary place may improve the reader's coordination of eye and brain and help him to discover for himself that he can read better than he thought. Certainly the use of machines does not constitute a reading program. As yet there is no unequivocal evidence that mechanical devices are essential to a successful reading program, or that they obtain results that cannot be achieved by other methods.

The Counseling Emphasis. At the opposite pole from the machine approach is the program whose accent is on counseling. Recognizing the relation of emotional difficulties and personality factors to reading (see Chapter 13), the reading teacher adjusts instruction to individual needs. For example, a group of delinquent adolescents who had a negative attitude toward reading rejected an approach that usually appeals to these young people: learning to read road signs, directions, and other practical material. Accordingly, the teacher made use of their interest in phonograph records, which they often brought to school. They identified words they knew in the titles and learned how to recognize the words they did not know. Soon they were reading!

Counseling and psychotherapy are also helpful in decreasing anxiety, dispelling apathy, and resolving inner conflicts that usurp the attention and effort necessary to effective reading. On the basis of an understanding of their individual needs, the teacher may assign students to an appropriate reading program.

Knowledge of Results. The retarded reader needs to be able to see that he is making progress; otherwise he will ask, "Why attend this class?" Some objective evidences of progress are lists of words that the student has learned to spell correctly, vocabulary cards containing words he can now recognize at sight, graphs and charts of his scores in speed and comprehension on daily exercises of comparable difficulty. A growing list of books that he has read, improved marks in his other subjects, and favorable specific comments about his reading by teachers and classmates are other evidences of progress. It is well for the teacher to conclude a period by asking, "What did you learn today?" or "What progress did you make today?" At the end of each term, members of reading classes should write an evaluation of their progress. This should include a comparison of their attitudes and difficulties before and after taking the course, should mention the reading experiences and materials they have encountered both in

class and outside that have helped them most, and should describe progress they have made.

To achieve a sense of progress, the student should be brought into contact with reading material that increases in scope and difficulty as rapidly as he is ready for the next step. He should become acquainted with more reading skills, acquire greater speed and accuracy in using each skill, and move upward from comics and light fiction to biography, popular science, and other more serious reading. A balanced program of reading should include at each stage some books that are hard enough to challenge his skill and some books that are easy enough to promote fluency.

Application to Regular Classes. One of the problems of the special reading class is to bridge the gap between special instruction and the regular class. This may be done in many ways. The reading teacher may use the students' assignment in a given subject as practice material in the reading class. Thus retarded readers are enabled to shine in their regular class as they have never done before. Linking the reading in the special class with regular class activities has several advantages: it affords the students further practice in the reading methods they have been taught; it appeals to the students as practical and time saving; it gives them the satisfaction of knowing success in subjects in which they have previously felt inferior. For example, students in one reading class who had made a study of the dictionary and its uses assumed leadership for the first time in their regular English class when this topic was introduced.

In one junior high school [28] a pupil in the reading class reads material on his own level about a topic or problem that is currently being studied by his subject class. He prepares his report and presents it orally to the other members of his small group. In this way he gains the self-confidence and reassurance he needs to meet the situation in the large class. When the pupil is ready to report, the reading teacher sends a note to the subject teacher to the effect that he has prepared a report for extra credit. The subject teacher accordingly plans to give the pupil an opportunity to report to the entire class. The subject teacher also provides easier reading material for these retarded pupils. When a pupil is discharged from the remedial-reading group, his official teacher is given the latest test results and a check list of difficulties in basic reading skills. This list is sent to all subject teachers, so that they can continue the work of the remedial teachers.

EFFECTIVENESS OF SPECIAL READING-STUDY GROUPS

We desire evidence of the effectiveness of special reading groups for several reasons: to be in a position to give retarded readers confidence that they can improve, to convince those who hold the purse strings of the value of this work, and to reassure ourselves, as teachers of reading, that our efforts will bring results.

Numerous studies have shown that students who are retarded by as much as two grades, as indicated by scores on a standardized test, can make significant improvement in reading if they receive skillful instruction not less than twice a week for a semester or longer [4, 15, 24, 39, 40]. For example, Landry [21] set up a controlled experiment involving 7,556 pupils in grades 7 to 12 in twelve representative cities. The control classes pursued the regular course of instruction in English; the experimental groups, matched with the control groups with respect to intelligence-test scores and initial scores on the Cooperative English Test: Reading Comprehension and the Traxler Silent Reading Test, devoted 226 minutes per month to systematic practice and testing on selected articles from current issues of the *Reader's Digest*. At the end of the experimental period, covering 7.5 months, the average gain on the reading tests for all the experimental classes was 13.2 months; for all control classes, 6.2 months. It seems that a program of this kind under the proper guidance of the teacher can produce real reading improvement in junior and senior high school over and above that produced by the usual class instruction.

Friedmann [15] compared the rates of progress of two groups of pupils of normal IQ before and during a time of remedial reading. The remedial group made an average rate of progress of 3.3 months per month during the period of remediation, a significant gain over the 1.09 months per month before they entered the remedial group. The group who remained on the waiting list showed no change in their rates of progress.

Evidence of improvement following special reading instruction has also been reported in controlled group experiments with college students. McCallister [25, 26] reported improvement in speed and comprehension by poor readers of low scholastic aptitude who attended special reading classes for ten to twelve weeks. Average gains, however, do not tell the whole story. When the scores are further analyzed we find marked variation in the progress made by individuals. For example, McCallister reported the following results: In comprehension, seventy students improved from one-half to three and a half grade levels; twenty-six students made no improvement. In rate, sixty-six students improved from one-half to four or more grade levels; thirty students made no improvement. In both rate and comprehension, fifty-six students improved. We need to study the improvement made by students taking the same reading course. Improvement may vary according to the needs of the individual.

Bliesmer [5] suggested three possible ways of measuring the progress of retarded readers: (1) by noting the gains they make during the course, (2) by comparing these with the average annual gains that they made in previous years, and (3) by noting the differences between their potential-achievement gaps at the beginning and at the end of the course.

The results reported in the many articles on special reading groups must be critically interpreted. We must admit that the results of the controlled

group experiments are inconclusive. It is virtually impossible to control all the factors that might influence growth in reading over a given period. When the number of cases is small, the influence of these uncontrolled variables may be considerable. Some so-called equivalent groups are in fact unevenly matched. There is need for more research on the reading process and for improvement in semantic interpretation; few research studies deal adequately with emotional problems. Moreover, few studies retest the students six months or more after completion of the training to see whether the gains persist or whether the special reading course achieved only a temporary spurt. Another limitation of these studies is that they depend upon inadequate means of measuring reading improvement. At best, a reading test measures only a limited number of reading skills, and often these are not among the skills that are considered of most importance.

A great deal of the improvement that is reported as a result of remedial reading is actually no improvement at all. If the same test is given at the beginning and at the end of the period of instruction, there is practice effect. If the student is trained in material similar to the test exercises, the test results may be misleading with respect to improvement in general reading. Moreover, tests of significance are often lacking; the gain reported may not take into consideration the probable error of measurement; the alleged gain may be merely a chance difference. According to Bleismer's study [6] of the reports of college reading programs, about half of them either did not use standardized tests or made no statistical analysis. It is also true that the improved psychological outlook that sometimes results from personal attention, or from the stimulus of mechanical devices, may temporarily increase interest and effort without making much change in permanent reading competency.

On the other hand, test results do not show the growth that may have occurred in other reading skills; nor do they reflect increased confidence in one's ability to learn, changed motivation, sharpened interest, improved concentration, or other attitudes that may eventually lead to improvement. These important outcomes of special reading groups can be evaluated only by supplementing standardized tests with informal tests, questionnaires, reading inventories, reading autobiographies, charts of progress, and day-by-day observation of students' responses.

As might be expected, the effect of special reading groups on students' grades is also difficult to demonstrate. So many factors other than reading may affect a student's college marks. The case for special reading groups cannot be pleaded on the basis of improved academic grades. After reviewing nearly one hundred studies, Robinson found "less than a dozen references to the effect of reading programs upon scholastic improvement. Of these, only one study having control groups reports apparently significant gains in terms of academic grades for reading classes" [32, p. 83]. Since Robinson's review was published, several other control group studies have

been reported [27]. Mouly concluded that "a remedial reading program can result in an improvement in academic grades for those students who take the course seriously" [30, p. 466].

Too frequently a reading program has been evaluated solely by the results of a standardized test which may completely fail to measure the particular reading skills on which the student has been working and in which he has gained proficiency. To prevent discouragement on the part of the student and of the instructor of the special reading class, if for no other reason, evaluation should be broad enough to include observation and introspective reports, as well as the results of more objective measures.

SUMMARY OF RECOMMENDATIONS FOR SPECIAL READING GROUPS

The special reading groups described in this chapter are only a few examples of the many unique programs that have been developed. There is no one best program; each should be adapted to the needs of the students and the available facilities and personnel. However, we would recommend the following features:

1. Select students for these special groups who have unrealized reading potentiality and are not getting the help they need in regular classes; present the class as an opportunity.

2. Provide time for the class in the student's regular program; do not add an extra period to his already heavy load.

3. Schedule at least one individual conference with each member of the group.

4. Plan the periods with the students; encourage them to take initiative and responsibility for suggesting the kinds of practice and instruction that seem of most value to them and the books they would like to read.

5. Respect each student as a person in a social environment.

6. Understand each student's needs and work with him to meet these needs. Recognize that reading is an expression of personality, and that improvement in reading usually improves personality.

7. Use tests for teaching purposes as well as for diagnosis, and supplement standardized tests with informal tests and continuous observation as the students work on their reading problems.

8. Create an atmosphere of optimism that is reinforced by experiences of success in reading.

9. Consider the interaction and relationships between the teacher and the members of the group as an important condition for learning.

10. Use the students' interests and ongoing activities as natural incentives to read. The reading done in the special group should grow out of interests and activities with which the student is vitally concerned. Reading should be made an enjoyable and rewarding experience.

11. In the beginning supply reading material that is at or slightly below the student's present reading ability. The practice material should resemble the kind of reading he needs to do in his school and out-of-school life. It should also

include variety in order to develop flexibility and to help the student learn to adapt his rate and method to the type of material and his purpose in reading it.

12. Provide for gradual progression of experience; do not introduce new words and more difficult sentence structure too rapidly.

13. Use reading assigned in other subjects as practice material, and give instruction in how to read these assignments more efficiently. This will facilitate the transition from the work in the reading group to reading in other groups.

14. Give drill whenever it is necessary in individual cases or when the group as a whole needs to overcome a specific reading difficulty.

15. Help each student to keep a record of his progress in reading.

16. From time to time as members of the group are ready for it, evaluate the group process and the learning that has taken place.

There is evidence that special reading and study-skills courses result in some improvement, though the amount varies greatly [14]. Required courses report the smallest gains. Research shows that the results of remedial instruction in reading depend a great deal on the extent to which the individual recognizes his need to improve. This is not to minimize the importance of the quality of the instruction and practice which the student receives.

In the future, reports of research on reading progress under different patterns of grouping should present an appropriate research design; specify the number of cases and describe them; state the objectives; describe the methods of grouping, instruction, and learning; state the reliability and validity of the instruments used to measure progress; and point out the limitations that should be observed in applying any conclusions to other situations.

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CHAPTER 11

Special Problems of Slow Learners

Slow learners who do not have the mental ability to read better should be distinguished from readers needlessly retarded by poor education and from readers handicapped by personal and environmental factors, readers having retarded language and speech development, emotional disturbance, unfavorable home conditions, or defective hearing or vision. The retarded reader's intelligence, arithmetic scores, and listening comprehension are higher than his reading achievement. He usually dislikes reading and does little or no voluntary reading. He realizes his parents' and teachers' concern or disapproval and is unhappy about his failure and copes with it in devious ways.

WHO ARE THE SLOW LEARNERS?

The slow learner, while he may resemble the retarded reader in being below his chronological age and grade level in reading, has less potentiality for improvement. In fact, he is sometimes overachieving. Kirk says: "The term 'slow learner' should be restricted to the child who does not have the capacity or potentiality to learn intellectual things, such as reading, at the same rate as average children. It should not be used to refer to educational retardation regardless of the cause" [19, pp. 172–173]. On verbal-intelligence tests the slow learner in school would score approximately 75 to 90 IQ or even as low as 60. According to this criterion about 10 per cent of our secondary school population would be classified as slow learners. They seem to be on the whole "slightly inferior physically to children of

average intelligence" [19, p. 173] and to have more minor illnesses and defects of sight, hearing, and speech. Their emotional and social behavior seems to be influenced by poor health and continual failure at home and in school. Under such conditions it is only natural that they dislike school, are frequently absent, sometimes become behavior problems, and drop out of school at sixteen or as soon as the law permits.

They are slow in learning to read, and progress more slowly than brighter children. They are often less stimulated to read in their home environment. All through the grades they struggle to keep up with the other children. Reading for them is a laborious process. It is hard for them to make sense out of their reading assignments in any of the school subjects, to understand abstract ideas, to organize, to remember, and to concentrate. Reading "does not become a part of the life of a slow learner" [19, p. 175]. Teachers and parents should be careful not to label these pupils as "slow learners," "retarded readers," "remedial reading cases," or to give them any other name that makes them feel inferior.

There are, of course, wide individual differences among slow learners. Some may never be able to read above second-grade level; the majority may be able to attain fourth-grade proficiency; some will learn to read material of seventh-grade difficulty. It is important to try to understand how they feel as well as how they read [3].

Mentally deficient children with IQs from 50 to 70 often have unrealized potential ability to read better. Believing that their potentialities are limited, teachers frequently fail to give them appropriate instruction in reading. Better teaching may result in higher group-intelligence-test scores. Remedial instruction has proved to be as valuable to some pupils designated as dull as it is to those considered educable. Intelligence thus seems to be a crystallization or result, as well as a cause, of learning. Low IQs obtained by retarded readers "may reflect their reading retardation rather than a basic inability to learn" [29, p. 50].

The slow learner who is already reading up to capacity cannot be expected to show any permanent sharp increase in his developmental reading trend as a result of special instruction. The problem here, at a given time, is to increase the breadth of his reading achievement rather than its level —to help him do the kind of reading useful and possible for him on his present level of ability. Effective instruction in reading is often given in connection with trips, work experience, and practical-living projects.

Although retarded readers may describe their difficulties as slow word-by-word reading, lack of comprehension, and inability to concentrate or to remember what they have read, deeper causes come out in the open in the presence of an understanding teacher, counselor, or reading specialist who listens patiently, sensitively, and creatively. Many poor readers are held back by fear—fear of more failure, fear of ridicule, fear of the competition of a brother or sister, fear of criticism, fear of expressing their real

feelings. Inner conflicts withdraw attention and effort from the reading process. A vague anxiety may give rise to feelings of inadequacy, helplessness, and hopelessness. Their idea of themselves is permeated with lack of self-confidence and self-esteem; it is difficult for them to put forth the necessary effort to learn to read more effectively.

The reading teacher should be alert to recognize and deal with these underlying emotional difficulties. He should recognize that group pressures may cause members to respond in unpredictable ways. He should be careful not to arouse latent sibling rivalry by showing preference for any one member. He should try to avoid situations in which any member would feel embarrassed or frustrated and try to create situations in which members will obtain group recognition and approval. He should be alert to reinforce positive insights.

ESSENTIALS IN TEACHING READING TO SLOW LEARNERS

Readiness before Reading. Since most slow learners do not read before the age of seven or eight, reading instruction for these children should be delayed until they can learn without failure. It is much more difficult to teach a "burnt" child—a child who has tried to learn to read and failed—than a child who begins when he is intellectually ready and can succeed. For slow learners the preacademic program should be lengthened. Whatever the pupil's present ability, the teacher must begin where the pupil is. The mentally retarded child often needs sense-training experiences such as learning to recognize colors, objects, shapes; matching symbols and sounds; recognizing signs such as "Stop" and "Go."

Activities Preparatory to Reading. Learning starts with a problem which the children want to solve or an activity in which they are interested —a visit to a farm, a factory, the firehouse, or another local attraction; arts and crafts of their own choice, or singing, rhythms, play, and social activities with classmates. Wight [36] described a reading program related to and originating in concrete experiences with sound and music in which pupils were enabled to master quite abstract and difficult concepts. These activities offer opportunities for them to think concretely, solve practical problems, and follow verbal directions. Out of these activities grows the need for certain kinds of drill, such as matching animal pictures, colors, geometric designs, letters, words; look-and-learn experiences using magazine illustrations, greeting cards, and the Dolch Picture Word Cards [4], as well as picture books; and exercises in auditory perception to learn to distinguish between different sounds—among four words, for example, three of which sound alike but one is different. They may supplement spontaneous conversation by reports of activities, by choral speaking, by simple dramatization. They can learn simple folk, patriotic, and sacred songs as well as some suitable popular songs. It is not too difficult for them

to copy their names and other letters of the alphabet in manuscript writing.

Take It Easy. Don't go too fast with slow learners. Let them read a great deal of material on their present level before they go on to more difficult books. Nothing is gained by trying to speed them up. Indeed, much may be lost—their self-confidence, self-esteem, and pleasure in reading. The "spur-fallacy"—attempting to challenge them with material that is over their heads—results in loss of personal confidence and self-acceptance. They need the experience of mastery of each new step. They become interested in tasks that they can complete successfully.

Build Positive Attitudes toward Themselves and toward Reading. Since many of these children have felt keenly their parents' disappointment over their failure to read, the teacher must be particularly careful not to show disappointment. Instead, he should accept occasional failure as a natural part of life, meanwhile providing an easy progression of reading experiences in which failures are few. He should accept the child, whether he succeeds or fails. If the teacher is overconcerned with his own success in teaching, it may be hard for him not to show annoyance when a slow-learning child fails to recognize words he is supposed to know.

If the slow learner has had previous experience of failure in school he feels inferior to others and is afraid even to try. An adolescent, looking back over her early school experiences, said, "My fifth-grade teacher was very, very unqualified as a teacher. She called us dumb-bunnies and other ugly names." When the teacher asks another pupil to help the slow learner read, he feels embarrassed—"All the little kids turn around" [3, p. 112].

It is especially important with slow-learning children to accentuate the positive—to emphasize what they *can* do. They need to set realistic goals for themselves and see objective evidence of progress toward these goals. The child who is failing may not be able to express his feelings in words, but he is uncomfortable and longs to withdraw from the situation. The longer a child has experienced failure and frustration in learning to read, the more intense his negative reaction is likely to be. There are a few simple but fundamental procedures for building more positive attitudes toward the reading situation: (1) the child should be accepted and appreciated as a person; (2) he should be helped to choose books he can understand and read successfully, with real interest; and (3) he should be aware of and rewarded for each step in the right direction and for his smallest success [20].

Try to Understand the Slow Learner. Children in general want understanding teachers. One rural youngster expressed his appreciation in the following words: "The teachers in this school seem to understand the pupils and that helps us to get along." It is most important to know what kind of person each child is, how he feels about himself and his reading difficulties, and what his motivations and fears are. For example, one teenage girl needed to take a more positive, hopeful attitude toward herself;

her older brother had recently been committed to an institution for mental defectives, and she was afraid the same thing would happen to her.

Some teachers tend to dislike slow learners; they think of them as a nuisance; they would like to get rid of them. Too often teachers take a fatalistic attitude toward retardation in reading. They let the pupil draw or schedule him for shop courses that require little reading. Consequently, he is never given the instruction and practice in reading which he needs.

Having an estimate of a student's reading potential helps the teacher to be realistic in his hopes for improvement [27]. The greatest gains may be expected of those whose mental age is clearly above their present reading age, who comprehend better when they listen than when they read, who read some books voluntarily, and who are present in school more than 80 per cent of the time.

Let Them Talk. It is important for slow learners to learn to communicate with others. By learning to talk better, they gain in ability to get along with people and acquire a necessary foundation for reading. They should expand their vocabulary by conversation and group discussion, informal dramatization and role playing, assuming responsibility for greeting and guiding school visitors, answering the telephone, taking messages by word of mouth from one teacher to another.

Relate Reading to Goals Important to Them. Reading has personal and social values rooted in one's home life and general environment. If a student can see the relation of reading to his present and future life, he will want to acquire the necessary reading skills. Requiring the slow learner to spend his time on subjects that are too abstract, texts that are too difficult, assignments that he cannot possibly accomplish, goals that he cannot accept —these are sure ways to intensify his dislike for reading.

Much of the reading used in the periods of instruction should have inherent use and purpose—it should not be just reading for reading's sake. For example, a pupil may read to get ideas and information he needs or to play his part in a dramatic reading of a story. Reading and writing for a class newspaper seem worthwhile to pupils. If a pupil lacks the skill to write a story, poem, joke, review of a book or movie, or description of an experience, he may dictate it to the teacher who will transcribe it. Slow-learning pupils get a thrill from seeing their names in print. Finding stories to read to younger children is another purposeful activity that builds their self-esteem.

Show Them How—Word Study. Give them systematic instruction in word recognition and perception and in getting meaning and pleasure from reading. Slow learners need more practice than the average in learning to hear differences and likenesses in letter and word sounds and printed forms, and in recognizing beginning sounds of familiar words [25]. They need continuous experience in getting the meaning of a word from the context, sounding it out, pronouncing it by syllables, recognizing familiar pre-

fixes, suffixes, and roots, and looking up words in a picture dictionary or a junior dictionary. To show pupils that the same word may stand for different objects or actions, the teacher may let them make picture dictionaries of their own. Ideally, instruction in reading grows out of activities in which the pupils are interested.

Appraisal while teaching helps them to identify the reading processes or methods that they can or cannot use successfully. For example, when some retarded readers were stumbling over small words, the teacher said, "You can read the big words, but the little words give you trouble." The group then studied the initial sounds of these small words. They mentioned familiar words that began with the same sounds and other words that rhymed with the troublesome words. They discovered similarities and differences among words like *what, when, which,* and tested themselves on word cards they had made. Finally they reread the story that had originally given them trouble. This time they were able to read it fluently. The teacher then remarked, "You see, the little words that cause trouble can be learned by the methods we have just used. What are these methods?" With a little help, the students described the procedure in their own words. Having acquired command of this method, they were ready to apply it to other reading situations.

Accent on Drill in Reading Skills. A program of reading with teen-age students, IQs from 67 to 102, described by Monroe and Backus [26], represents the approach to reading through specific drill. Word study was emphasized. Words missed were studied, examined for clues, and read in short sentences until mastered. Children who had mastered the first 500 words of the Gates word list and who had a reading grade of 3 began phonetic drills according to the method described by Hegge, Kirk, and Kirk [15]. The theory underlying this procedure is that distaste for reading may be caused by lack of word knowledge and by inability to comprehend. If, by working for accuracy and complete mastery in some of the basic reading skills, the pupil is brought to the point where he can succeed, he is started on the road to reading proficiency. These slow-learning pupils may have enjoyed the simple routine exercises and gained a sense of achievement. The following features may have largely accounted for the success reported for this program: The individual's level of reading ability and interest was accurately ascertained and practice in improving his reading was begun at, or a little below, his present level, where he could succeed. From that point he was helped to move ahead as fast as he was able, and he was kept aware of his progress. Throughout the program he felt that the teacher was genuinely interested in him and expected improvement.

Provide Suitable Reading Materials and Visual Aids. Films and film-strips are suggested to introduce a story or article, to teach vocabulary, to reinforce points made in a lesson, and to create a desire to read a certain kind of material. Radio and phonograph recordings may be used for the

same purposes (see Chapter 18). Reading to learn how to perform magic tricks and communicating through puppets, first to the teacher, then to larger audiences, have been used successfully with retarded readers [14].

Too often the slow learner is given the books for his grade, which are too difficult. To develop speed and fluency they need to read many books on their present reading level before they go ahead to the next. Several series of basic readers as well as supplementary books and pamphlets will give them the practice they need. Enjoyment and use of the material read are key conditions. What the pupil reads should always make good sense. Up-to-date, attractive, interesting books a little below his present reading level will give him the experience of reading with ease and pleasure. But we must be careful not to give him a reader he has had in earlier grades. For slow learners with adolescent interests the number of suitable books is limited. But it is increasing. Reading should be fun. It cannot be fun if the books are too difficult. Many a teacher has seen the magical effect of giving a slow-learning pupil a book that captivates his interest and that he can read with comprehension.

Describing vividly the setting of the story; referring to its humor, mystery, or suspense; giving some interpretation of the characters; reading a page or two aloud each day; putting questions on the board to guide the students' silent reading; giving help with vocabulary when necessary; and using film-strips or stills from the motion picture of the book—these were the ways in which a teacher motivated retarded readers to read Dickens's *A Tale of Two Cities*. When they had finished the book, they asked, "How soon can we read some more good literature?" [24].

A group of retarded adolescents wrote a play based on a short story, "The Get-away Boy" [34, pp. 199–212]. Such playwrighting can be fun; it appeals to their interest, improves their phrasing and comprehension, and provides for individual differences.

The slow learner's preferred reading is practical and personal. In one special class the pupils made books illustrating their summer adventures. Each page consisted of a picture and an explanatory sentence or two that the pupils had dictated and the teacher had printed. Another "volume" consisted of other stories which the class had written and illustrated. Especially valuable are books dealing with life-adjustment problems: suitable vocations, boy-girl relations, and other adolescent concerns. The slow learner should learn how to read the newspaper, how to fill out application blanks and other forms, and how to read the signs and directions in his environment. Teen-age slow learners especially enjoy simplified short stories and popular articles from magazines such as *Good Housekeeping, The Saturday Evening Post, Reader's Digest, Popular Mechanics, Seventeen,* and *Young America,* as well as periodicals concerned with outdoor life, scouting, natural history, and about teen-agers like themselves.

Personalized Instruction. A group of twelve- to fourteen-year-old mentally handicapped boys looked especially interested and happy. Their enjoyment was keenest when they were acting out sentences written specifically for each pupil. "The boy with red hair will sing a song." "The boy with the red and blue sweater will go to the door." Sentences such as these were especially effective because they were personal. The redheaded boy was proud of his singing ability and delighted to use it in carrying out his direction.

They next read sentences about the daily events and the boys' activities and interests, which the teacher had written on the board. This was a form of individualized experience reading.

Then subgroups were formed. The more able boys chose appropriate books or articles on their independent reading level. Some played games such as word lotto—matching word forms with illustrative pictures. Another favorite game was building sentences from words already learned. The teacher worked with a group reading *My Weekly Reader*. She asked questions to arouse the pupils' curiosity and desire to read the article and to direct their thinking about each paragraph. For example, before they began to read the second paragraph the teacher said, "The second paragraph gives a common name for our government. What is it?"

PUPIL (after reading the paragraph): Uncle Sam.

TEACHER: Yes. Now see if you can find out what Uncle Sam is doing to save the buffalo.

PUPIL: He's giving them places to live.

TEACHER: What does he keep other people from doing to them?

The pupil found the sentences containing the answer. The teacher understood and accepted what these boys could do and showed no disappointment when one of them did not read so well as she had hoped.

This was an excellent period from the standpoint of group work—a friendly atmosphere of learning and succeeding; subgrouping within the class; reading material that was personal, meaningful, and enjoyable to the students and within their range of comprehension; use of daily experiences as reading material; a variety of activities to prevent fatigue or boredom; and skillful, immediate motivation to read each paragraph.

Make the School Program Attractive to Them. A kind and understanding teacher, good social relations in the classroom, and interesting things to do are the "big three" of the program for any learner. Slow learners are no exception. The teacher should be qualified to teach slow learners. The group should be small enough for much individual instruction. Instead of a competitive atmosphere, the attitude of helping one another to learn should prevail. As the child moves, when he is ready, from one sub-

group to another or from easy to slightly more difficult material, he gets a sense of progress and success.

PROVIDE FOR TRANSITION TO HIGH SCHOOL AND WORK

When the slow learner enters high school, he is confronted with many problems. After being in special classes in elementary school where the work is carefully adjusted to his needs and interests, he is usually turned loose in a high school that makes no special provision for him. If he is placed in a special reading group in high school for a semester or two, he is then expected to succeed in regular classes. Retarded readers who have come up out of the slough of despond, and have started upward on their true developmental curve should be able to make good in the regular classes. But not so the slow learner; the curriculum and methods of instruction must be continuously adjusted to his needs.

The slow learner cannot be expected to do standard high school work. The high school freshman with a Stanford-Binet IQ of 75 cannot be expected to read ninth-grade books. If his instruction in reading has been excellent he should be able to read simple fiction and factual material on about sixth-grade level. Being given high school credit for his work increases his effort and satisfaction.

As the slow learner approaches the time when he will be leaving school, his reading should become increasingly practical. Groelle [13, p. 186] suggested the following kinds of experience:

Learning the specialized vocabulary for the kind of work he is planning to do

Reading and filling out job application blanks

Learning to use telephone books, city directories, road maps and street guides, menus, recipes, directions, radio and theater programs

Reading advertisements, mail order catalogues, want ads with understanding and discrimination

Reading newspapers critically, so far as he is able

Using the dictionary to look up unfamiliar words

BIBLIOGRAPHIES OF BOOKS FOR RETARDED READERS

A large number of bibliographies have been prepared to suggest suitable reading material for retarded readers. Most compilers make no distinction between books for slow learners and books for retarded readers. Actually, they may not differ much in interests and both will be reading on grade levels lower than their chronological age. The following are some of these useful sources of easy-to-read, interesting books:

American Adventure Series, Wheeler Publishing Company, Chicago.
American Heritage Series, Aladdin Books, American Book Company, New York.

American Heroes, The Bobbs-Merrill Company, Inc., Indianapolis, Ind.

Beginner Books, Random House, Inc., New York.

Childhood of Famous Amercans Series, The Bobbs-Merrill Company, Inc., Indianapolis, Ind.

Cooke, D. E., and others: Reader's Digest Reading Skill Builders, Reader's Digest Educational Service, Inc., Pleasantville, N.Y.

Cowboy Series, Beckley-Cardy Company, Chicago.

Dale, Edgar: *Stories for Today* and *Stories Worth Knowing*, United States Armed Forces Institute, Madison, Wis.

Dolch, Edward W., and Marguerite P. Dolch: Basic Vocabulary Series, Garrard Press, Champaign, Ill.

Dolch, Edward W., and Marguerite P. Dolch: Famous Stories, Garrard Press, Champaign, Ill.

Dolch, Edward W., Marguerite P. Dolch, and Beulah F. Jackson: Pleasure Reading Series, Garrard Press, Champaign, Ill.

First Book Series, Franklin Watts, Inc., New York.

Goldberg, Herman R., and Winifred T. Brumber (eds.): Rochester Occupational Reading Series, Science Research Associates, Inc., Chicago.

Kitchin, A. T., and V. F. Allen: Reader's Digest Readings: English as a Second Language, Reader's Digest Educational Service, Inc., Pleasantville, N.Y.

Larrick, Nancy (ed): Junior Science Books, Garrard Press, Champaign, Ill., 1960.

Strang, Ruth, and others: *Teen-age Tales,* D. C. Heath and Company, Boston.

Walpole, Ellen W.: *The Golden Dictionary,* Simon and Schuster, Inc., New York.

Walt Disney Story Books, D. C. Heath and Company, Boston.

Somewhat more difficult but appealing to the more able retarded readers are the following:

Landmark Books, The Gateway Books, and Allabout Books, Random House, Inc., New York.

Real Books, Garden City Books, New York.

For retarded readers, and especially for slow learners, it is important that the reading material be factual, related to their lives, and about matters of real concern to them. The organization should be simple, clear, and straightforward. Unusual words and sentence structure will throw them. Some attempts to simplify standard material really make it more difficult—the wording is unnatural. Retarded readers are sensitive to anything they interpret as "writing down." They call such material "baby stuff." They may even reject books that are appropriate for them if they have large print and the format of children's books.

GROUP PROCEDURES USED WITH SLOW LEARNERS

Five essentials of effective group work might well be reemphasized:

1. Reading groups for slow learners should be considered as part of their total learning program. Activities throughout the day should be used to motivate reading—reading in science and social studies; reading notices, directions,

clippings on bulletin boards, captions in television programs; recreational reading including the "reading" of pictures in popular magazines, posters, etc.

2. The atmosphere should be optimistic—with attention focused on what pupils *can* do; work-minded—giving a feeling of accomplishment; happy—because of friendly relations with the teacher and one's classmates; and interesting—because of the attractiveness and appeal of the reading material.

3. A variety of activities should be included in each period: activities requiring reading, reading games, experiences dictated by the pupils and transcribed by the teacher, reading in suitable books, checking comprehension by use of workbooks; drill on certain words or reading difficulties as needed by individuals.

4. Individualization within each class by means of subgroups and attention to individuals.

5. A class library for free reading—games, pamphlets, picture books, other books and magazines. These books and pamphlets should be about things in which the pupils are interested. Illustrated commercial pamphlets about cars, planes, etc., interest the older boys.

The procedures used in working with slow-learning students are not fundamentally different from the procedures used with other students. They, too, understand and remember better if they have had firsthand experience and if the ideas are made graphic and personal; they, too, like to illustrate and dramatize what they have read. The difference is chiefly in the slower pace and the need for much more activity and varied repetition for learning at each level. Any method or any combination of methods that is adapted to and proves to be effective for the individual pupil is recommended. Robinson [30] described a number of procedures for teaching reading to slow-learning pupils. Krugman [22] presented evidence showing that the application of mental-hygiene principles to children in grades 4 to 8, retarded one to five years in reading, raised the pupils' achievement and improved their school adjustment.

Group Therapy. The use of group therapy for reading problems may be sound. The poor reader may associate remedial instruction in reading with previous experiences of failure. Consequently, ill-timed or premature drill on reading skills may further lower his self-esteem, deepen his feeling of inadequacy, and increase his sense of failure or his resistance to learning. An approach which meets his need for recognition and success will increase his readiness for the necessary instruction in reading skills. Lipton and Feiner [23] described how a group of 9 fourth-grade boys, failing in all subjects, especially reading, moved from disorganization and competitiveness to self-directed learning and social activity. The readiness to read that developed was shown by their comments: "We don't want to play; we came here to read."

With children having serious emotional problems, group therapy may bring about improvement in reading as well as in personal adjustment. Harris raised the question: Should remedial help in reading be replaced

by therapy aimed directly at the child's emotional problems? His answer is "no," for these reasons: (1) Good remedial assistance does help most poor readers to improve in reading; (2) improvement in reading contributes to self-confidence, stability, and social adjustment; and (3) facilities for psychotherapy for children are too limited to meet the needs of a large proportion of the poor readers [14, p. 574]. A combination of group therapy and appropriate remedial instruction has been found to be most effective.

How certain therapeutic principles may be translated into classroom procedures used in teaching a high school class in American literature was delightfully described by Dorothy Bratton [2].

INDIVIDUAL WORK WITH SLOW LEARNERS

A number of cases have been reported in which slow-learning students have acquired sufficient reading ability to meet their needs. Several of these case studies will illustrate the methods used by different workers for handling special difficulties.

The Case of Steve [32]. Steve, almost seventeen years old, was timid and unaggressive, with marked feelings of inferiority and inadequacy. He said he was the only child in his family who had difficulty in reading. The others used to remind him of his reading inability and this made him mad. He had a slight speech defect, slow and halting diction, meager vocabulary, and little conversational ability. His errors in word recognition tended to persist. The results of three individual Binet intelligence tests given at different times showed practically no variation: 56, 48, and 56 IQ. He was quite skillful in handwork and was a substitute on the basketball team. He was tall and thin and walked with a slow, shambling gait.

During his seven years at various public schools he had not learned to read or write. He had become a chronic truant and also had a record of petty theft. During the first two-and-a-half years at the training school he was given the usual instruction in the "three Rs" but remained practically a nonreader.

When he was sixteen years and ten months old he was given individual help in reading. A combination of methods was used: he was taught the kinesthetic method of pronouncing, tracing, and writing words as wholes; simple phonics helped him figure out unfamiliar words; he learned words that were exceptions to the simplest phonic rules by associating them with pictures and later used the look-and-say method. The phonic and kinesthetic methods were helpful in correcting reversal errors and the confusion of similar letter and word forms. Steve showed excellent retention of words.

Since the reading of first- and second-grade books would never be of much value to this boy, he was taught a special practical vocabulary of 500 to 600 words and phrases found in signs and notices, directions, ad-

vertisements, labels, and the like. This kind of reading interested Steve, and the progress he made gave him much satisfaction.

During the first twelve months of this individual work he made a gain on a standardized reading test of one year, four months. In the next fifty-five lessons he made only two months' further progress and in the following fifty lessons only one month's. At the end of the individual work he was reading on almost third-grade level. Either he had reached the limit of his learning ability for the time being, or the methods used were not such as to promote further learning. Other students at the training school who did not have Steve's emotional problems made greater progress. In no case was there a miraculous solution of the reading problem, but many students slowly acquired sufficient reading ability to serve their life needs.

Emotional Deterrents in the Case of Terry. Many cases of mental retardation are so interwoven with emotional difficulties that one is never sure of the student's real mental ability. His performance in reading may fluctuate with his mood. Terry, for example, gave the impression one day that she did not know any of the words the reading teacher thought she had learned in previous weeks. When the teacher held up the charts with sentences for her to read, she did not even attempt to read them. But when stimulated by playing teacher and holding up the chart for the teacher to read, she showed great glee in correcting the mistakes the teacher purposely made; she then read every sentence correctly. After that successful experience she responded very well in supplying the missing words as the teacher read parts of sentences from a book. This lesson had much more vitality and interest than the usual practice of merely reading the sentences on the charts. Terry had the immediate purpose of correcting the teacher's mistakes and the exhilaration of exchanging roles with the teacher. On other occasions the teacher asked her to serve as an assistant in making reading material for the other pupils. Objective evidence that she could learn and make progress in reading was particularly important to Terry because underlying all her activity was her fear of disappointing her parents.

Many slow-learning pupils are reading slightly above expectation according to standardized tests. But the marked fluctuations in their performance in reading indicate greater potential than they ordinarily show. Motivation is of crucial importance. Success in reading may increase their general self-confidence and self-esteem; this may later result in higher performance on intelligence tests. Therapy sessions should help these pupils gain a more hopeful idea of themselves, and skillful instruction in reading gives them a tool for self-realization.

Use of Social Assets in the Case of John. Some slow learners have considerable social intelligence. This is a most important asset. John, for example, a large boy, seventeen years old, had a friendly manner of greeting people. He made a good appearance, was good humored and sympathetic, and showed genuine kindness toward people. All these qualities would be

useful in the vocation in which he was most interested—assisting his father in his business. Apparently there were good home relationships. He was a member of a happy family which accepted him as he was and gave him confidence in himself.

Although the *Reader's Digest* was a little beyond his present reading level, the reading teacher helped him read some of the stories and articles. He enjoyed them because they were more in line with his interests than most of the material in his reading books. At first he read word by word, not in phrase or thought units. The reading teacher encouraged him to give more expression to his reading by asking such questions as this: "If *you* were eager to go, as the boy in the story is, how would you say it?" When he met an unfamiliar word, the teacher helped him to acquire word recognition skills by asking: "What do you think the word might mean? What would make sense here?" She helped him to divide the word into syllables and to pronounce it. If a new word was composed of two familiar words she called his attention to the familiar components. To encourage him to read for meaning she asked questions that called for prediction or interpretation and focused his attention on the content: "What do you think happened next? What kind of boy was Tom? How do you think finding his dog made him feel?" After a while he began to read with more expression and understanding.

Since people were important to John, the teacher encouraged him to read for social purposes—to dramatize a story with other boys, to tell someone about it, to write a review for the school newspaper or bulletin board, to enrich his conversation at home. Instead of using formal tests of comprehension, the reading teacher considered these social applications as evidence of John's functional comprehension of the material he read.

Tommy, Who Needed Affection. The relationship with the teacher conditions the pupils' learning. Older students want to respect and trust their teachers; younger children are often more obvious in their desire for affection. Twelve-year-old Tommy seemed in special need of affection. He sat close to the reading teacher and at one time put his arm around her neck.

One day Tommy came into the reading room saying, "I wonder if I'll get it right today. Last time I got mixed up with 'Sally' and 'Sport.'" The reading teacher responded to his enthusiasm and encouraged his active thinking by such comments as these: "What do you think will be happening in the story today?" "Let's see if you can find the title of the story." Looking at the picture she asked, "What's happening here?"

TOMMY: The sky is getting very dark.
TEACHER: Who is running away?
TOMMY: Dick and Sport.
TEACHER: Why are they running?

TOMMY: It's beginning to rain.

TEACHER: I think Dick is talking. Let's see what he is saying.

With this kind of orientation Tommy read with expression and enjoyment.

Tommy next worked on a page of the practice book used in connection with the story. When he had completed it, the teacher commented, "You got that page all correct." Tommy next did a page of exercises on initial consonants—words beginning with *f*. The teacher read the words out loud:

"How about *letter*, does it begin with the same sound as *fork?*"

"*Talk*—does the beginning of *talk* sound like the beginning of *fork?*" The teacher continued with other similar questions. Tommy responded correctly to this informal test of auditory perception.

Then he read another story from the book, with the teacher directing his attention to the thought conveyed through the words. Throughout the entire period, with its variety of activities, he maintained interest and concentration. At one point he said, "It's important to read, isn't it?" and added, "It's fun to read, too. Would one get a prize for reading?"

The teacher replied: "*You* don't need a prize; you get fun from reading itself. That's much better than a prize."

There was something about Tommy's performance that was difficult to describe—a certain detachment or aloofness—as though someone else were talking through him. This was most noticeable in his comment, "It's important to learn to read." His pleasure in reading and in being with the reading teacher seemed more spontaneous than it had been earlier. One got the impression of higher mental ability than the Binet test indicated and good functioning of his ability in this situation. Despite a discouraging medical report of organic deficiency and some evidence of deterioration, he seemed to be progressing in reading.

Brain-injured Children. There are biological, social, and psychological factors involved in the reading of brain-injured persons. After having a neurological examination, the person may become more fearful, anxious, and preoccupied with his defect. Such feelings tend to decrease his concentration and ability to resist distraction. The secondary effects may be more serious than the primary brain lesion. The brain-injured child has difficulty in learning because he is unable to resist distraction and sustain attention. He is helped by underlining or blocking off in some way the word or words to be read and by supplying multiple clues to their meaning [33]. Motivation is especially important. Remarkable learning has been reported with brain-injured children when motivation was at a maximum.

Still more baffling are the reading cases who give no evidence of intellectual defect, defects of sense organs, or organic brain disease. These have been called cases of "congenital word-blindness." Although there is "not

one single symptom nor one straightforward objective finding on which to base the diagnosis" [16], these cases have certain common characteristics: the reading disability persists and is resistant to special teaching; certain errors such as reversals, rotation of certain letters, and confusion between certain letters occur frequently; the difficulties in reading and writing appear along with difficulty in recognizing numbers, notes, and other symbols; and the difficulty runs in families. When there are no observable physical handicaps, minimal brain damage sufficient to cause reading problems is difficult even for a specialist to identify.

CONCLUDING STATEMENT

Reading teachers should try to ascertain how much improvement can be expected from the slow learner. Then they should find some personal vital interest with which to ally reading. For example, a ten-year-old who had an interest in nonsense rhymes and stories such as Dr. Seuss's *One Fish, Two Fish, Red Fish, Blue Fish*, read these books with eagerness and enjoyment. Another slow learner, having achieved success through his singing, wanted to learn to read the titles and words of popular songs. He dictated and read the following experience story:

I will be a guest singer at our Explorer's Club meeting on Wednesday in the recreation hall. They tell me I sing like Ricky Nelson.

I am going to sing the following songs: "Teen-ager in Love," "Little Too Much," "It's Late," "There'll Never Be Anyone Else but You," "Hound Dog," "White Sport Coat," "Bye-bye Love," and "Sea Cruise."

I hope they all like my singing. My reading teacher thinks I am a very good singer. I will make a record some day, if the singing at the club meeting is a success.

An older boy with some skill in auto mechanics improved his reading by using the Rochester Occupational Reading Series on gas stations. The teacher's responsibility is to help the slow learner acquire as much reading skill as possible so he can meet life's demands. This is best done in lifelike situations.

When a group of retarded readers were asked to give their best advice to teachers, they made these suggestions:

Explain more. A little bit of work explained is better than a lot of work without explanation.

Don't get cross right away if the pupils don't understand.

Try to find out the reasons for their difficulty and give individual help.

Teacher should understand the pupils as well as the pupils understand the teacher.

One boy summed up his advice to teachers in three well-chosen words: "Take it easy." Like many other slow learners, he was tired of being pushed and hurried and harassed.

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Special Problems of Able Learners

The most retarded readers in many of our schools are the bright students; many are reading far below their potentialities [16, 17]. In one study of the intelligence scores of high school students who were failing, their scores were found to be equally distributed over the entire range of intelligence, instead of piling up at the lower end, as was expected. Gifted students were failing in subjects that they should have been able to pass easily. Many more were merely getting by when they should have been doing superior work. From a review of research, Gowan concluded that nearly all gifted children are, to some extent, underachievers [9].

What are the causes of this discrepancy between mental ability and achievement? They are obviously complex and appear to be of early origin. Competence in reading and arithmetic are among the many factors reported to be associated with achievement versus underachievement in gifted students. Others include parental interest and encouragement but not domination; goals that are challenging but not impossible to attain; social interaction and concern for others rather than withdrawal; self-confidence and enthusiasm; efficient use of time [9].

THE ABLE LEARNERS

Able learners constitute about 15 to 20 per cent of the school population; the gifted, about 1 or 2 per cent. The latter are "old for their age." With an IQ of 117 a twelve-year-old enters junior high school with a mental age of fourteen. If his IQ is 133, his mental age is four years be-

yond his chronological age. Consequently, he is often ahead of his class and becomes bored with waiting for them to catch up with him. Routine and drill irk him. Textbooks crammed with facts that are impossible to organize make reading unrewarding for him.

Able learners are good at comprehending abstract material and making generalizations. They will read eagerly to find the answer to an important question or to solve a problem that seems worthwhile to them. Their insatiable curiosity and eagerness to learn motivate them to explore and enjoy the world of books. They read for pleasure [28].

They like to work independently. On their own accord they will frequently make an intensive study of a topic of interest. They become interested in science, travel, and social problems earlier than the other pupils. "Give us books and other materials to work with and don't interfere with us," was the advice one gifted youngster gave to teachers.

Although they have special verbal facility, they can also do well in subjects that require motor and manipulative ability, especially if these subjects demand intricate planning and a grasp of general principles. Some individuals, only average in abstract verbal ability, have special talent in music, drama, and the dance.

Able learners generally do not resemble the stereotyped caricature of the round-shouldered, pale, thin, bespectacled, precocious child. They tend to be socially sensitive, engage in an average number of extraclass activities, and are superior in health and attractive in personal appearance.

Gifted children learn to read early, almost half of them before they come to school [18]. A few begin to read before they are four years old and show exceptional interest in reading. They begin to read adult books earlier than other children. They come from homes in which the parents enjoy reading, often read aloud to their children, and where many suitable books are available.

These are merely central tendencies. There are, of course, many individual differences within the gifted group [35].

IDENTIFICATION

First-grade teachers should promptly identify those children who know how to read when they enter school. The able learner usually stands out to the observing teacher because of his interest in and accurate use of words, his interest in reading, his ability to organize and relate ideas gained from a number of sources, his eagerness to explore new fields. On standardized tests of intelligence he rates high [6]. On standardized tests of achievement he is likely to score one or more years above grade level. However, a gifted student may read mathematics and science with high comprehension and yet fail social science and English because of poor reading skills.

To appraise a student's reading potentialities is difficult. First, it is difficult to get an accurate measure of his general mental ability. Scores on a group test of intelligence depend a great deal on the individual's reading proficiency. Moreover, other factors that are lowering his reading score may also affect his intelligence-test results (see Chapter 1).

LOSS OF INITIAL INTEREST

It is important to keep able learners' interest in reading alive by making it a rewarding experience. If the teacher is unaware of their high reading proficiency, they are likely to find reading a disappointing experience. One bright boy was given the sentence: "The boy can run." His comment was, "You don't have to learn to read to know that." A docile little girl in the first grade who was already reading on the third-grade level, after dutifully reading several pages of a very dull primer, looked up at the teacher and said, "Boring, isn't it?" A less tractable little boy, under similar circumstances, said to the teacher, "Take that pusillanimous primer away!" When the books they are given to read are dull and boring, when the teacher makes them do reading drills or go through a reading-readiness program they do not need, and when they have to sit and wait while other children stumble through a story, gifted children lose their initial enthusiasm for reading and turn their active minds to mischief or other things.

THEIR READING DEVELOPMENT

As with all students, there are two main goals for able learners—reading development and personal development through reading. Problems in connection with reading development involve the early identification of proficient readers, appraisal of their reading potentialities, and provision of progressive experiences conducive to reading development. A surprisingly large number of able learners mention difficulty in concentrating—a difficulty that may be due to poor environmental conditions, inner conflicts, lack of purpose, or hopelessly dull and meaningless reading material.

Problems in connection with personal development through reading involve understanding of the developmental tasks to which reading may contribute—the achievement of self-esteem, understanding of oneself and others, a balanced leisure-time program, insight into different kinds of life situations and problems, appreciation of the prevalence of problems that one may have thought peculiar to oneself, and development of a sense of direction or destiny and social responsibility [5, 19]. Reading may also contribute to the development of special talents and vocational goals.

How Do They Learn to Read? We know that many gifted children acquire flexible, rapid, effective habits of reading. If we knew more about

the psychological process involved, we might be able to teach other children to learn to read in the same way. We get some information on this question from the introspective reports of able children. Apparently they learn to read in many different ways [2, 18, 35]. Some seem to learn to read all by themselves. "I got interested in books and read them; that was all there was to it," one gifted boy said. For many this interest in books stems from having had the best literature read to them as soon as they could understand. Some learn by noticing the words underneath pictures. One youngster said, "I was a comic book enthusiast before I went to the first grade and I learned to notice small words together with the pictures and remembered them. If I could not make out a word I would ask my mother." Others say members of the family taught them to read by various methods, but favoring the phonetic approach. The preferred pattern seems to be listening to stories, looking at the book being read and distinguishing certain words, and learning some common words by sight. Soon they begin to take an analytical approach, sounding out words "by syllables and the letter's sound."

They like to be on their own in reading. One sixth-grader said, "In the second grade I would take some books home and Daddy would help me read them, but I liked it better when I could read them myself." Another sixth-grader expressed the feeling of many able learners of her age when she said, "I just love our library periods." They want some guidance in learning at first, but "when you get started, you can go ahead at your own speed."

Able learners often show special interest in certain fields or topics. Don said, "From the first to the fourth grades I read the books that they had in school—when I had to. But I would take Daddy's science books to school to read when I got ahead of the others. Sometimes I couldn't read them but I liked to look at the pictures and sometimes I could read parts of them. In the fifth and sixth grades I liked aviation books, but now, in the twelfth grade, I am interested in nuclear physics." These able learners are capable of attaining the reading maturity described by Gray and Rogers [11].

From the beginning, personal relations exert a strong influence on a child's reading. If his first attempts evoke approval from a loved parent or teacher or classmates, his interest and effort will be reinforced [22].

What Does Reading Mean to Them? Gifted children often become completely absorbed in books. One girl said that when she was reading *Heidi* no one could come into her room until she had finished it. A vivid example of the complete absorption of a very exceptional child is given in the following quotation from Somerset Maugham's *Of Human Bondage*. It describes the small boy's first experiences with books: [1]

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[1] From *Of Human Bondage*, p. 37, by W. Somerset Maugham. Copyright 1917 by George H. Doran Company, New York. Reprinted by permission.

One day a good fortune befell him, for he hit upon Lane's translation of *The Thousand Nights and a Night.* He was captured first by the illustrations, and then he began to read, to start with, the stories that dealt with magic, and then the others; and those he liked he read again and again. He could think of nothing else. He forgot the life about him. He had to be called two or three times before he would come to his dinner. Insensibly he formed the most delightful habit in the world, the habit of reading: he did not know that thus he was providing himself with a refuge from all the distress of life; he did not know either that he was creating for himself an unreal world which would make the real world of every day a source of bitter disappointment.

In their early years these exceptional children often respond to the wonder of books by living what they read. One girl, who mentioned *The Wizard of Oz* as her first book, said, "I loved the magicalness of it and the wonderful adventures. I always repeated the magic phrases to see if they would work for me." Another said she thought of her stuffed animals in the same way that Christopher Robin did. One boy said he found the Dr. Dolittle books charming until he was about fifteen. He reread them five or six times and found different things in them each time. To one person a book may be just a good story; to another it may be an interpretation of character. Each book leaves its personal residue of meaning. Sometimes children get from a book something quite different from what an adult expects them to get. Each book speaks to them in accord with their own needs and purposes.

Gifted children and young people are often clearly aware of the personal values of reading—for enjoyment, for building vocabulary, for broadening interests, for acquiring information, and, most important of all, for gaining understanding of themselves and other persons. A high school boy said—

In reading *Silas Marner,* you get an idea of what the life of a miser is like and how he feels; in reading Dickens, you gain understanding of how a poor person lived in his times. From other books you learn what is involved in making a decision, and how to handle certain kinds of situations. You make applications to yourself: "Am I doing this with my life? How can I make myself a better person?"

Under favorable conditions reading continues to be one of "life's inexhaustible pleasures." As a leisure activity it is not even crowded out by the many other adolescent interests [36]. This is what two gifted junior high school pupils say about their interest in reading:

I love to read; I spend much more time in reading than I do in other pleasurable recreations.

Now in the seventh grade, I belong to Revelers, Campfire Girls, Y-teens, 3 Star Club; write to about twenty people and take knitting, piano, and oboe lessons, so my interest in reading is slowing down. But I still say, give me a good book any time.

In addition to the enjoyment reading affords, able learners realize that it fulfills other needs. The academically ambitious know that school success and admission to college depend on it. The socially minded find reading useful in carrying on a conversation. The vocationally oriented are aware of the importance of reading in most vocations.

Gifted children sometimes find the world of books more satisfying than the real world. Consequently they use reading as an escape from thinking, desirable physical activities, or developmental tasks. One youngster who was unable to win social acceptance turned more and more to reading. In other instances parents and teachers unwittingly intensify an already over-intellectual tendency.

EXPERIENCES NEEDED

In planning a reading program, one should keep in mind the characteristics of able learners and make every effort to meet their needs. Although the able learners love and cherish independence and want to take initiative, they also recognize the value of some guidance in learning. In one high school a number of seniors—all A students—requested special help in reading. They were concerned with where they were and where they wanted to go in reading. Competent readers in college are often surprised at the progress they make in reading-improvement classes. Graduate students working for doctorates find that they can improve their reading. Nearly all capable students can learn to read better and faster. Sometimes they develop more effective reading methods themselves in response to an intellectually stimulating environment.

Provide for Creative Activities. Superior students respond to stimuli to creative expression. Among the stimuli presented to a high school English class by Rinker [25] were quotations, proverbs, and epigrams jotted on the board to read or not, as they pleased; the "Poet and Peasant Overture" played over and over until the class had filled the blackboard with words suggested by the music; and suggestions that the students write stories for younger children and then read them to these young critics.

Give Them the Instruction They Need. Although gifted children often help themselves to gain proficiency in reading, they can be saved unnecessary trial and error by appropriate instruction. Those with higher IQs usually show the greater improvement. A reading program for able learners described by Bond [4] produced gains on the reading tests of from eight to forty-eight months for all but two pupils and favorable reactions on the part of pupils, parents, and members of the faculty.

If able learners are to be given more difficult reading material, they should also be given help in meeting the difficulties they will encounter. They will need skill in detecting subtle propaganda and in reading poetry which leaves much unsaid—much that must be inferred by the reader.

Even gifted pupils need help in finding clues that lead to hidden meanings.

Instruction in the use of indexes, tables of contents, periodical indexes, and other aids to locating information on a particular topic is especially valuable for gifted children who want to work independently on some project or problem. Many of them also profit by suggestions on how to study, how to read different kinds of material, how to take notes, and how to write reports.

In addition to the basic reading skills, they need to develop ability to make a critical evaluation of what they have read, to assess ideas they have gained from the reading, and to analyze their own responses to reading material. Able learners will find effective, mature reading methods advantageous all through school and college. They will also profit by them in later life when, as business executives or professional people, they have to extract the ideas they need from a vast amount of reading material.

Gifted students can reach higher levels of appreciation and interpretation of meaning than they usually do [8]. Donahue [7] described the procedures she used in a junior high school class in which there were a number of children whose intelligence and reading ability were far above their chronological age. She began by letting them analyze cartoons in some of which the implications were not obvious. Next they tried to understand dramatic characters by noticing what they said and did in one-act plays such as Susan Glaspell's *Trifles*. From plays they made the transition to poems that unfold their meaning by revealing what the characters do and say, e.g., Lowell's "Yussouf," old English ballads, Daniel Sargent's "It's the Rain," and Robert Frost's "The Fear." Next they noted symbolism in poetry, as lilacs associated with New England spring. After a poem had been read aloud, questions of interpretation were raised for class discussion and for independent analysis. The pupils began to look for key lines, and their comprehension and appreciation of poetry increased.

The creative aspects of reading—reflecting on what one reads and finding the hidden meaning, anticipating outcomes—especially appeal to able learners. They learn by hunting for the truth in great books. From a combination of independent reading, creative writing, and study of mass media, students get a sense of the role of words in world affairs. They are eager to use reading to solve problems. They may use ideas gained from reading in preparing stories to tell younger children; in giving plays and puppet shows; in making posters, collections, displays of favorite books; in writing tall tales, poems, letters to their favorite authors, book reviews; in preparing bulletin-board exhibits and files of information on different subjects; in selecting books to buy or request for their class library.

Don't Waste Their Time. In many classrooms a great deal of the gifted student's time is wasted. "The worst thing," said one child, "is oral reading. It is boring to listen to all the slow pokes drawling it out. I should

listen, but I am usually drawing pictures." She was referring to the practice of having each pupil in turn read aloud a paragraph or two from the same book. One can easily understand why this procedure is distressing to gifted children who read fluently. If they follow along with the class, they cannot help becoming impatient with the slow, stumbling reading; if they read ahead and are called on, they are scolded for losing the place. One sixth-grade youngster said: "The teacher worked with the slow ones and I read ahead and got into trouble because I would be two or three chapters ahead and when the teacher asked me a question I would answer her from where I was and not from where the class was." Some able children, sensitive to the feelings of others in the class, want to "keep with the other kids." A social motive keeps them from reading ahead.

The teacher can do much to avoid this inexcusable waste of time. If the students are not resourceful in finding worthwhile things to do, the teacher may plan with them individually ways to spend their school time. Subgroups within the regular class help to solve this problem. "Now," said Kay, "we are not in one big group, and each group goes as fast as they want to go." Jane said, "I think the teacher need not spend too much time with the smart ones—give them interesting things to do and let them go ahead and do them."

Enrich Their Curriculum. As able learners progress through the grades, the opportunities for curriculum enrichment are unlimited. They often want to read intensively on a particular problem. Books on that subject should be available to them. When asked about his problems, one gifted boy said, "The librarian is my problem. When I asked for the book on science I needed she said, 'That is an adult book, and you are a juvenile.'" Fortunately this is an atypical situation; most librarians are very helpful about providing suitable books for individuals of all levels of reading ability and interest.

However, making interesting literature available is not quite enough. Even ardent readers need some help in choosing books and in using reading to ascertain and develop their interests. One pupil paid tribute to the teachers who had influenced her interests in reading; one teacher had got her interested in composers' lives, and another had encouraged her to read a variety of biography and fiction.

Group projects requiring wide reading are even more valuable for gifted students than are individual pursuits. Group activities are the ideal way to combine reading with the social experience needed by the intellectually superior student. Writing and producing a play or radio script, serving as editor of a school paper, being a sports columnist on the local paper, working on a class committee responsible for giving a report—activities of this kind involve human relations as well as reading. Even an individual who has not learned to relate himself to other persons may become interested in a few who share his intellectual interests. This experience serves as an

entering wedge to wider social relations and often contributes to his emotional development.

Give Them a Chance to Match Wits. These children love to talk. They especially enjoy group discussion about their favorite books—laughing over funny parts, sharing the thrills of "suspenseful" incidents, and wondering why the characters behaved as they did.

If able pupils are together in a number of special classes—creative writing, literature, science, and social problems—they do not have to mark or waste time. They can go ahead as fast and as far as they wish. These classes should provide challenging books, equipment for experimentation, and opportunities to communicate through art, music, and rhythms as well as through spoken and written words.

They like to share their reading experiences with others; that is why reading clubs are so popular. These clubs are most successful when the members themselves decide on the purpose of the club and evolve a satisfying club procedure. In the Cleveland Major Work Classes, the pupils read first to understand and enjoy the story; they read a second time to answer any questions that might be asked; in a third reading they noted new words and parts of the story which they particularly liked. With such preparation their discussion periods were exceptional. A sign put up in their rooms expressed their point of view about reading: "It is what I *think* and how I *feel* about what I read that is important" [23, p. 83].

Allow More Time for Reading in School. Gifted children would like to have more free reading—unhurried periods to enjoy reading with no strings attached. They can make good use of these periods if they have proper guidance and have had instruction in the deeper levels of interpretation and critical reading. While some are reading without supervision, the teacher can give instruction to other pupils, individually or in small groups. An advanced reading course, slightly beyond their present reading ability and interests, with no credits, no written book reports, and no grades, proved to be most challenging to the bright children invited to join it. They enjoyed the experience and profited by it. One girl said, "I never read so many books in so little time." And a boy remarked, "I like the way we come into the room and just sit down and talk things over" [12].

Help Them to Evaluate Their Reading. What difference has reading made in their lives? Has it widened their interests? Has it brought them a better understanding of themselves, of others, and of the world in which they live? Have they used any ideas gained from reading to meet practical situations? Have they gained in ability to interpret what they read? Can they detect more quickly an author's intent to influence the reader? Have words acquired richer meanings? Have they become more critical in their choice of books? Discussions of questions like these are stimulating to gifted pupils and help them to plan a still finer reading program for themselves.

Let Them Follow Their Interests. With a little guidance they can plan their individual reading lists, making a kind of contract for the year's reading. Gifted children are capable of a two-way appreciation of poetry —reading and writing it. At first, of course, they listen to the poems read to them and often remember parts after they have heard them several times.

Many gifted boys, especially, are interested in science, often as early as the primary grades. Through pictures and simple, accurate science material they can build a good foundation. They learn the word *experiment* by seeing simple experiments performed. They learn the names of elements by seeing and handling them and using them in experiments. Older pupils may help with younger children's science clubs and discussion groups.

Any topic may invite intensive reading. A second-grade youngster became interested in people who write books. His interest spread to his friends and other members of the class. For a while they used all their available time in reading about famous people. The Bobbs-Merrill Childhood of Famous Americans Series was especially helpful. They read their book reviews to the group and rewrote them in the light of the criticism received. Their reading culminated in a program for parents in which they represented some of the famous people about whom they had been reading [10].

A group of able high school seniors, thinking back over their experiences in school, made comments such as the following:

The happiest experience I had in elementary school was in the fifth grade. ... We were not limited to a regular schedule of study. If we were slow in certain fields we had time to catch up. If we were faster than most in other particular fields we were given a chance to go ahead and make as much advancement as we could safely. Another important factor was that we were given a chance to develop our ingenuity and use our ideas instead of our teacher's plans.

Give Them Freedom to Choose Their Reading. Although youngsters appreciate being guided in their reading by parents and teachers, they do not want to have their choice of reading dominated by adults. Some take a negativistic attitude: "I didn't want to read books my mother wanted me to read. That scared me off of fairytales." The youngsters' advice to parents is, "Don't worry. If you start opposing a child's choice, you may make an issue out of it." It is no use trying to make children read certain books before they are intellectually and emotionally ready. One mother insisted that her young teen-ager read Shakespeare. "I resented it so," the girl said, "that I began calling everything I disliked 'Shakespearean.'" Later, of her own accord, she began to read Shakespeare with keen interest and appreciation. Children themselves believe that if you let a child's natural curiosity have play, he will come around to good books. One boy suggested it might be a good idea "to go through a stage of reading comic

books and get them out of your system." Many speak of outgrowing comic books. The important thing is to get an interest in reading and to feel free to make one's own choices.

Their resistance to required reading seems to stem from the fact that they want to read what they want, when they want to read it. Required reading seems to be a symbol of forced labor. They want to read a book at their own pace, not at a pace specified by an assignment "to read two more chapters." Some of them dislike having to dissect a book in class and object strenuously to having to go over and over it until everyone comprehends. However, they are fair-minded enough to admit that sometimes when they have read a book that was required, they enjoyed it and got out of it what they needed at that particular time.

Some read whatever happens to be in their environment—"I used to read my brother's books, mostly haphazardly." Parents can often make a book seem like something special. They should also be ready to share their reading with the children and be willing to discuss the books the children want to talk about. To do this effectively, parents must keep up with the younger generation—their times, tempo, interests, needs.

Social influences may be negative as well as positive. Some children read the books their friends are reading, just to be accepted. One girl said, "All my friends were discussing what Nancy Drew did, so I read *Nancy Drew*. But I disliked it so much I got other friends." In reading some of the poor-quality books the other boys were reading, one youngster discovered that the characters were not true to life—they were either all good or all bad. The reading of these children seems to be most influenced by friends older than themselves.

Turn Them Loose in the Library. Many go to the public library of their own accord. One youngster tells of getting her first library card "at the ripe old age of five." Children in the elementary school may be introduced to the public library through a class visit. Storytelling hours can often be arranged at the library. Older students may take responsibility for the story hour for young children. Both older and younger children are members of a library council that plans the program for these story hours. After each story hour the children evaluate the program with a view to improving it.

In the Long Beach public schools, small groups of fifth- and sixth-grade children whose reading ability was seventh-grade level or above were offered a special program under the instruction of the school librarian and the classroom teacher. The librarian's purpose was to acquaint these children with the history of various forms of literature and to make available many kinds of books—biography, mythology and folklore, poetry, and translations. Each group spent one forty-minute period a week in the school library, where they had the individual guidance of the librarian. She also arranged an introduction and exhibit for each area to be read.

With such a vivid introduction, each child found a book that he wanted to take home. The next week they met with their classroom teacher for another forty-minute period to discuss their interpretations of and reactions to the books they had read [30]. Both the measurable and the intangible results of this program were gratifying.

Provide a Wealth of Reading Material. Recognizing that able learners have wide reading interests, teachers, parents, and librarians will try to provide books in many fields. Recognizing that these students read to find out, they will select authentic, informative books. Recognizing their potentialities for appreciation of literary quality, they will be sure to include children's classics in the collection. They will remember that the reading interests of gifted children are not very different from those of other children, expect that they are usually accelerated in their interests, as in other aspects of their development. One junior high school student summed up his idea of a good book as follows: "It should be about something you like, interesting and well put together, with action and appeal to our age group." They dislike books that are "boring, childish, and far-fetched." Some of the gifted students say that "illustrations do not seem to matter." Others think that poor pictures may be a deterrent to comprehension and enjoyment. Said one girl: "The illustrator sometimes pictures the characters and events as I hadn't imagined them, and then I wonder whether I've read the story badly."

We should discover and use resources in the school and community to provide suitable reading material for able learners of all ages. Librarians are great allies in supplying book lists, selecting classroom libraries, and arranging other reading opportunities for these children. An annotated book list of sources of reading materials for gifted children, compiled by Miriam E. Peterson, was published in the February, 1954, issue of *The Reading Teacher*. Members of the National Association for Research in Science Teaching ranked highest books that "suggest further problems," "stimulate further reading," and are "accurate and authoritative" [3]. (See also Chapter 18.)

When able learners have suitable reading material at hand, they will not languish in idleness waiting for the slower pupils to finish the assignment. Able learners are in their element when they have a wealth of reading material, freedom of choice, and opportunity to discuss what they have read.

Help Them to Plan a Balanced Daily Program. Excessive absorption in reading may be avoided if gifted children are helped to plan a balanced daily program of reading, social experiences, outdoor and creative activities, radio and television, and unscheduled time. This balance among activities is particularly important around twelve and thirteen years of age when the majority of children tend to reach a peak in their voluntary reading.

So many children today see television shows and listen to radio programs that these avenues of learning cannot be ignored. Able learners often associate these experiences with reading. They hear new words which they want to discuss and learn more about. They are introduced to a type of story or play of which they seek further examples in books. They readily appreciate the relative values of reading and other avenues of communication, but generally prefer reading because, as they say, "You can read at your own speed. You can choose what you want to read. You can form your own opinion. You can use your imagination." With a little guidance they will put television in its place and achieve a balanced daily program.

SHOULD ABLE LEARNERS BE SET APART?

Every learner needs challenging experiences to stretch his reading abilities, and experiences easy enough to increase his fluency. He needs success, he needs creative outlet, he needs discipline, whether he is bright or dull [13, 38]. In the elementary grades the able learner should engage in the activities of a reading group unless they are a needless repetition for him. Perhaps the pupils are delving for the first time into the intricacies of outlining or learning the technique of syllabizing. If the able learner is not in the group, he will miss these new learnings and perhaps fail to retain previous learnings; he will lose the opportunity of discussing a story's deeper meanings and matters of style in a group under the guidance of a teacher.

In their heterogeneous groups, able learners work with pupils of less ability—to help and be helped by them in various activities. This, too, is an important part of the education of gifted children. In any class they may also make a special contribution to their group and sometimes to groups of younger children. They can help other children find the answers to questions. They can locate stories and other reading material needed for the project or unit being studied. They may contribute original poems, drawings, and other creative products needed by the group.

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CHAPTER 13

Individual Treatment of Reading Cases

Although instruction in regular classes and in special reading groups can and must be individualized, there are some individuals whose reading problem is so complex that counseling and psychotherapy are necessary. In some cases initial failure to learn to read has caused emotional disturbance; in other cases, emotional disturbance arising from other sources is preventing them from concentrating on reading. Some of them lack essential reading skills; some have reading ability but fail to use it; some show signs of unexplained fatigue, fears, anxiety, or inability to concentrate, to put forth effort or to take initiative. They have not been able to make much progress in the group situation.

Individual conferences in private offer these students the opportunity to explore their interests and relationships; to clarify their thoughts and feelings; to gain a new orientation and a more hopeful and realistic view of themselves; to acquire insight into their reading problems and related emotional difficulties; to learn to look at the situation in a more rational, tolerant, realistic way; and to obtain the specific practice and instruction in reading that they need. From the counselor's method of working with them, they learn ways of approaching problems themselves.

Of central importance in serious reading cases is the way in which the individual regards himself. Repeated experiences of failure, accompanied by disparaging comments from other people, help to create the negative self-concept so often found among poor readers.

UNDERSTANDING NEEDED

The successful reading specialist brings to each individual case a background knowledge that embraces the complex causation of reading difficulty, the dynamics of behavior, the psychology of learning, and the methods and materials essential to the teaching of reading. Some of this background has been given in Chapters 1 and 2; more specific diagnostic procedures are described in Chapter 14. This chapter will first recognize the importance of physical factors, intelligence, and educational experiences; and will then delve more deeply into the emotional problems and personality factors that are related to reading.

Physical Factors. A competent refractionist will detect visual defects that may contribute to the reading difficulty directly or indirectly. Auditory defects may hinder the child from identifying letter sounds in words and associating the printed symbol with the sound of the word. Endocrine disorders, especially hypothyroidism, have been reported to be associated with reading failure in a fourth or more of the cases studied [8]. Hypothyroidism characteristically causes lack of effort, fatigue, and underachievement. Treatment of endocrine disorders and other complicated medical problems is not within the province of the reading specialist. There is a growing tendency to attribute some cases of reading disability to brain injury (see Chapters 1 and 11).

Mental Ability. Reading requires abstract verbal ability or intelligence because it is a process of translating into meaning sensory perceptions of various kinds. It is difficult to assess the level at which an individual is capable of performing this operation. As suggested in Chapter 1, when the client is able to comprehend a passage that is read to him better than he can comprehend a comparable passage that he reads himself, this indicates reading potential.

When the client has a mental age on the Stanford-Binet test that is higher than his reading-achievement age, and scores higher on the performance scale of the Wechsler than on the verbal, these are further indications of potential for reading. The most outstanding single feature of the unsuccessful reader's Wechsler profile is that it shows a higher score on the performance than on the verbal part of the scale. Among the performance subtests, Picture Arrangement scores are often high. According to Wechsler [42, p. 176], the combined Object Assembly and Picture Arrangement scores nearly always exceed the combined Block Design and Picture Completion scores. Within the whole total performance group, Digit Symbol is usually the lowest score. This subtest requires sustained attention, which may be disturbed by the anxiety that is often felt by unsuccessful readers [24, p. 194]. They also tend to do poorly on Arithmetic, Digit Span, and Information, all of which resemble classroom situations. These subtests identify difficulties without isolating

causes; the unsuccessful reader's superiority in performance over verbal scores "may be due to an inherent lack of verbal ability," or to emotional interferences with verbal ability, "or simply failure to learn to read" [13, p. 269].

The new Wechsler vocabulary has considerable diagnostic value over and above its measurement of intelligence. Many of the words may evoke personal associations bearing upon important aspects of human experience [31]. Emotional disturbance may either depress or stimulate word learning. "When the personality make-up is such that intellectual knowledge becomes the most important conscious weapon against the onslaught of the feared unknown" [24, pp. 89–90], the unsuccessful reader may unexpectedly achieve a superior Vocabulary score.

Unexpected, too, is the improvement in reading that is sometimes made by individuals who score low on intelligence tests. The worker always gives the client the benefit of the doubt. He uses clues from tests, interviews, and observation as a basis for selecting appropriate methods and materials of instruction, and he constantly adjusts his procedures to the response of the client.

Educational and Cultural Deprivation. The child may get off to a poor start in the first grade because of illness; the teacher may disregard his lack of readiness for formal instruction; he may feel antagonism toward the teacher; he may be overprotected or subjected to too much pressure at home—any of a number of conditions, plus subsequent neglect of reading instruction, may partly explain why he turned up as an unsuccessful reader in high school. Cases that show unfavorable home and school histories are usually complicated by primary or secondary emotional problems.

Cultural conditions in the home may also be related to reading development. Snavely described certain social and experiential factors that differentiated college freshmen in the highest decile on tests of speaking, writing, and reading from those in the lowest decile [33]. The educational and professional status of the parents, the number of books owned by the student and by his family, and the ownership of phonographs and typewriters—these were the background items that most clearly differentiated the high reading group from the low group. Two items that did not differentiate significantly between the two groups were the mother's working outside the home before or while the child was in elementary school, and family ownership of radio and television sets. Many personal, social, and cultural factors combine to create a predisposition to read in a certain manner—critically, accurately, selectively, or otherwise [9].

Emotional Difficulties. Reading difficulty may be a symptom of underlying emotional conflict. On the other hand, inability to read may itself create emotional problems. Even a small success in reading may increase

self-confidence. From a seven-year research project with a group of forty-five children who were studied from grades 3 through 9 at the Laboratory School of the University of Chicago, Haggard tentatively concluded that "there is a great deal of correspondence between the intellectual and the personality facets of behavior when 'personality' is taken to mean the manner in which the individuals relate to other persons, or symbols, or things" [15, p. 400, copyright 1957 by the University of Chicago].

The incidence of emotional involvement in reading cases has been variously estimated at 6 to 75 per cent or even higher. Severe cases of reading disability show some degree of emotional involvement. Of the 114 emotionally disturbed children in a mental hospital, 75 per cent were from one month to three years below their mental ages in reading [27]. In some cases no progress can be made in reading until the emotional problems are solved.

The complex reciprocal relation between emotional problems and reading ability has been studied in several ways. Teachers of reading in schools and reading specialists in clinics have reported their observations. Statistical studies have been made of the respective characteristics of good and poor readers and of the reading ability of emotionally disturbed children. This kind of analysis has yielded little of value [12, 29]. Clinical diagnoses have given more significant information, but in interpreting these clinical findings we must remember that children referred to clinics are not a representative sampling. They may be referred primarily because of emotional problems rather than reading difficulties.

Emotional problems may have as surface manifestations complaints such as, "I read too slow," "I can't remember what I read," "I can't concentrate," "I read word by word," "I feel tired when I begin to read," "I don't understand what I read." On a deeper level there may be fears of making mistakes, of failing, of having people know how poorly they read, of growing up; there may be lack of self-confidence, a concept of self as a person who cannot learn; there may be a suppression of all feeling, or an inability to take responsibility for choices; there may be a resistance to learning, a refusal to allow another will to be superimposed upon him, a determination to be himself; there may be an unwillingness to do anything unless it can be perfect; there may be a chronic feeling of failure and a consequent reluctance to attempt anything; there may be a fear of success, a greater need for attention than for achievement.

It has been suggested that there are three principal ways of accounting for the relationship between emotional difficulties and reading problems [5].

1. In some cases unfavorable conditions produce reading failure and consequent emotional problems:

| Unfavorable home | Reading | Emotional |
| and school conditions $\longrightarrow$ | failure $\longrightarrow$ | problems |
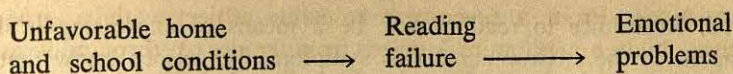
Situations in which the reading disability produces the maladjustment are thought by many to be the most common. Unfavorable school and home conditions or physical defects may give rise to an initial reading difficulty which soon begins to have emotional repercussions. The potential reading failure "may enter school as an unhappy child who cannot free his energies for learning, or he may enter as a happy, well-adjusted child who fails to learn to read and becomes maladjusted because of his failure" [26].

Initial failure to learn to read may affect the child's relations with his parents, depending upon the value they place on reading achievement. To fail in reading is to fail in one of the child's most important developmental tasks, as many parents and teachers see it. Sensing this, the child becomes insecure, anxious, tense—conditions that further defeat his attempt to read. Being labeled "a retarded reader" or sent prematurely to a reading clinic may even make a reading case out of a child who has really showed only normal errors in the process of learning to read. The anxiety that parents and teachers feel about a child who does not learn to read may be transferred to the child himself; this will further retard his learning processes.

The child's social relations with his classmates may also be affected; if the school atmosphere is highly competitive, the poor reader feels humiliated. In his efforts to get his studying done, he may be deprived of normal social activities. As the child continues to fail to learn to read, he becomes more and more emotionally disturbed; the reading in each grade becomes more difficult, and other children show greater and greater superiority.

When the causative factors are educational, it is not surprising that children respond well to an educational approach. Successful reading experiences foster desirable traits of personality; this does not happen in a program where skills are poorly taught and pupils get no satisfaction in using them.

2. The second situation is one in which emotional factors may lead to reading failure:

A complex of	Inner conflicts,	Failure in
emotional $\longrightarrow$	instability, $\longrightarrow$	reading
factors	etc.	
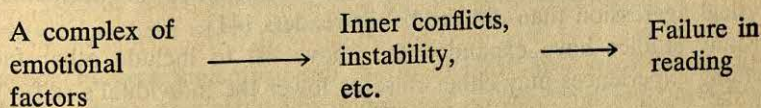
In some situations, inner conflicts and emotional instability may prevent an individual from concentrating on the reading process. He may not be accessible to instruction in reading until the emotional block has been

removed. Resistance to reading may be a means of expressing hostility to someone in the environment. This symptom also lets us know that the child is emotionally upset and calls attention to conditions that should be changed [21]. Both reading difficulty and emotional disturbance may reflect underlying conditions which can be uncovered only by a thorough diagnostic study.

3. Reading disability and emotional problems usually have a reciprocal relation. There is a circular process:

Emotional factors	$\longrightarrow$	Reading difficulties
Increased reading difficulty	$\longleftarrow$	Anxiety and further emotional disturbance
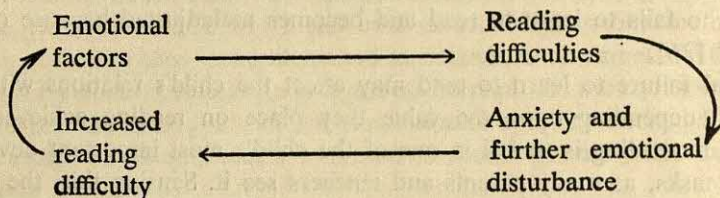
Personality is a dynamic unity, a gestalt that embraces both emotional factors and reading performance. The individual's response to the printed page is conditioned by his self-concept and by various other aspects of his personality (see Chapter 1). On the basis of a study of thirty-four children in residential treatment for emotional disturbance, Tamkin [38] suggested that both the emotional problems and educational disabilities are the outcome of the same underlying conditions.

We must remember, too, that emotional responses as well as reading skills are learned. If a given response causes tension or anxiety the individual tries to change it. If it is satisfying, he tends to persist in it. He is motivated, as Mowrer [22] has suggested, primarily by fear or by hope.

Frequently Observed Characteristics. Among the personality characteristics that have been most frequently observed in reading cases are anxiety [16], fear, tension, withdrawal of effort, lack of sustained attention, antagonism to school, compensatory interests, and general lack of emotional and social responsiveness. The majority of the severe reading cases that have been reported seem to be shy and withdrawn; they lack drive, initiative, and interest in reading. They are often submissive and almost always insecure and apprehensive. A few show overaggresive behavior [25]. One study of almost 200 fifth- and sixth-grade boys and girls showed that the poor readers had more memories of accidents and physical aggression than did the better readers [41].

Many studies have expanded the above list to include other factors. Reading experiences may either raise or lower the individual's self-esteem; they may reduce or intensify his difficulties in living. They may either increase or alleviate the individual's anxiety. Anxiety may be reflected in slower reading, less understanding, and less recall of content [6]. Of the 164 college students studied by Hill [17], those with "adequate" reading comprehension had a mean verbal IQ of 120 and a mean nonverbal IQ

of 114 on the Lorge-Thorndike intelligence tests. They gave indications of feminine interests and attachment to the mother, a high regard for books, and a warm feeling toward others. Those low in comprehension scored approximately 100 IQ in both verbal and nonverbal intelligence; they likewise tended to identify with the father, to show masculine interests, to disregard books, and to feel hostile toward others. The lowest-ranking students in each of four college classes were also low in reading ability as measured by the Cooperative English Test: Reading Comprehension C_2, and in adjustment as measured by the M.M.P.I. and Borow's College Inventory of Academic Adjustment [4]. These and other studies present reading as an expression of personality.

Gann [11] studied superior, average, and retarded readers in grades 3 to 6 matched as to chronological age, IQ, mental age, school experience, and sex. Using the Rorschach method as the main measure of personality organization, she found indications that the retarded readers were less stable than the good readers, not so well adjusted emotionally, less adaptable socially, more fearful and less secure in the face of challenges, less efficient in the use of their potential mental capacity, and more concerned with small detail. All this would indicate that retarded readers are, in general, less efficient in dealing with the complex challenge that reading offers.

From an analysis of Rorschach tests administered to 309 boys and girls between the ages of six and fifteen, all of whom were retarded readers, Vorhaus [39, 40] found four unique configurations or patterns of response, each one of which occurred in 72 per cent of all the test results. The configurations were as follows:

1. The individual's principal way of adapting to life is to repress his inner drives. This inhibits growth; he lacks spontaneity.
2. The individual lacks emotional responsiveness to the external world. The pleasure drives he feels are not acted out.
3. The creativity which the individual possesses has no outlet. He may respond submissively but feel rebellious. He can achieve, but refuses to do so.
4. The individual is responsive to stimulation, but feels that it is necessary to repress these strong feelings. He is afraid of his feelings of anger, and may turn them inward against himself. Of a group of elementary school children who were exposed to roughly equivalent pressures to achieve, a large proportion "became tense, anxious, guilty, or rebellious and performed less well than they might have under more relaxed conditions" [15].

Similar characteristics were reported in a more recent study of thirty-five fourth-grade children [30]. When aggressive drives are disciplined away, the impulse to read may also vanish. When children cannot express their feelings openly, they may channel them into resistance to learning. These clinical cases of reading deficiency appeared to be predominantly passive and unable to put forth the effort that reading demands. On the

Rosenzweig Picture Frustration Test, however, retarded readers revealed more than average hostility and aggression toward others [34].

These two apparently conflicting clinical pictures—one showing passivity and the other hostility—may actually be complementary. The retarded reader is one whose experiences with adults have damaged his self-esteem. He would naturally feel both resentful and hostile, but also weak and incapable; thus he would be passive and in need of being told what to do. Some situations would evoke the passivity-dependency pattern, and others the hostile-resistant pattern. One thing seems clear: the emotionally disturbed retarded reader is not free to use adult help creatively; he either rejects it or follows it slavishly and mechanically. In either case progress is unlikely.

READING AND THE DYNAMICS OF PERSONALITY

Some reading difficulties seem to have their roots in infancy and early childhood. Some seem to originate during the preschool child's struggle to move away from the complete dependency of babyhood. The origin of other reading difficulties can be traced to home and school conditions occurring at about the time the child was learning to read. Still others stem from a great variety of disturbed relationships at home and in school. An attempt will be made here to suggest the dynamics in some of these patterns.

Dynamic Processes in the Personality Organization

Pattern 1

During the first few months of life the infant gains impressions that may influence his later modes of response. For example, if, during the first six months of dependency he cries and cries—the only method he knows to relieve his discomfort—and no one comes, he may in some vague sort of way become convinced that it is useless for him to put forth effort; he becomes apathetic. If his subsequent life experiences reinforce this initial impression, it may become his habitual response.

That this feeling of inadequacy and dependency may be related to reading inability is suggested in a number of reading cases. For example, Jane, at sixteen years of age, was shy and lacked reading interest and drive. Having experienced nothing but failure, she disliked school and the teachers. She refused to take any initiative or responsibility for understanding her reading and writing difficulties, or for making a plan to overcome them. Her attention span was short, and nothing that the worker suggested aroused any interest or effort. This lack of initiative seemed to be beyond her conscious control. She liked the worker but seemed unable to establish any fundamental relationship with her [37, p. 131].

Pattern 2. The child who fails to develop the independence that is normal for his age may show a general immaturity which is reflected in his reading:

Sooner or later, perhaps around three years of age, the child who thus far has enjoyed his dependency and freedom to follow his own natural rhythms meets with greater pressure to conform to the ways of civilized life and to his parents' expectations. The way in which he adjusts to this deflation of his idea of his own omnipotence may affect his future learning. When faced with the necessary restrictions of life, he may respond in either of two extreme ways: (a) accept dependency on his parents to keep his sense of security or (b) try to maintain his exalted self-concept by his own efforts, at the expense of security. The person who has a healthy personality achieves a gradual revision of his sense of omnipotence in the framework of a supporting relationship. He attains security through self-realization, not through submissive dependency. This kind of security is fostered by parents who help the child to do things for himself; thus he comes to regard himself as a competent person who is able to incorporate new values into his old value system.

Reading problems seem to arise predominantly from the submissive pattern —in children who have clung to this dependent relation for security. Since they do not feel obliged to maintain a flaunted independence or a high level of aspiration, these individuals assume an attitude of emotional subordination, and conform passively to the demands of their parents and teachers [37, pp. 131–132].

Family Attitudes and Relations

Pattern 3. Family attitudes throw light on reading problems. One pattern has as its central feature a home that withholds love or rejects the child unless he meets its high standards with respect to learning to read. Sometimes, through excessive effort, the child may achieve status in such a home. But more frequently he outwardly conforms to the demands of the home while resisting inwardly. This inner conflict produces an apathy that prevents him from putting forth the necessary effort. His attempts to repress his rebellion result in a suppression of spontaneity and enthusiasm. Nonreading may become an expression of unconscious resistance to learning, a symbol of his will to assert himself [18, 40].

Pattern 4. The child is from a home where the mother is openly hostile, critical, rejecting, nervous, easily angered, nagging, and dominating; she punishes the child for his school failures. The father seldom shows fondness for the child. In addition, the child may be jealous of a baby who came at about the time he was learning to read [21].

Pattern 5. The child has a mother who, while not openly hostile, is tense and overprotective. Overprotection tends to suppress a child's natural eagerness to learn. When too little is expected of him, he grows

to expect little of himself. The child may have been overindulged during the preschool years and neglected when he reached school age. The mother may also be insidiously coercive; she demands perfect obedience. An attempt to force a child to be a credit to the family often evokes resistance if it is not accompanied by real affection and concern for the child as a person. A slow child whose parents or teachers constantly prod him to hurry will tend to develop either anxiety or negativistic attitudes toward reading. In most of these cases the father shows little fondness for the child. Missildine studied thirty children with reading disabilities who were normal in intelligence, sight, and hearing; all were emotionally upset by their relations with someone in the family [21]. Failure to read may be a neurotic symptom, not a passive inability to learn. The child who suppresses his curiosity may be suppressing his potential reading ability [18].

Pattern 6. A great variety of conditions may make a child unhappy. He may be bothered by his parents' quarreling, concerned over a possible or actual divorce, upset by rivalry with a brighter brother or sister. Missildine [21, p. 266] reported the case of a ten-year-old boy with an IQ of 117 in the low fourth grade who misbehaved in class, talked out of turn, continuously annoyed the teacher, was sent to the principal's office twice a week. Since the first grade he had stuttered and had had difficulty in reading. He read slowly and uncertainly with no reversals but many errors and spontaneous corrections. According to the physician's summary, the problem originated when the child was between five and six years old. Until then he had been overprotected by a cold, rejecting mother and had had all the attention of his maternal grandparents; just when a new baby was born, he was pushed off to school. He showed his resentment by his behavior. "His reaction of remonstrance had started a campaign of condemnation which completely cowed and crushed the boy. He lost all confidence in himself. The child's difficulties are the result of, and reactions to, a maternal attitude of cold hostility" [21, p. 266].

Of more obscure causation was the case of Helen:

Her background was socially, economically, and culturally favorable. She could carry on an interesting, pleasant conversation; her oral vocabulary was superior; her IQ on the Stanford-Binet test was 111. Yet, at sixteen years of age, she was reading below the fourth-grade level. The central factors interfering with her improvement in reading seemed to be a deep-seated anxiety, complete confusion in word recognition, and a concept of herself as a person who could not learn to read. In school she was greatly embarrassed by her poor oral reading; in the individual conferences at the Reading Center she constantly tried to cover up her inability to recognize words, making wild guesses in preference to admitting that she did not know the word. Her mother and some of her teachers took a hopeless attitude toward her. In school she was passed from grade to grade without showing evidence of achievement. Accordingly,

problems accumulated as texts increased in difficulty, and everything combined to increase her own feeling of hopelessness and her anxiety to maintain her social position in her family and with her age group. To all outward appearances, Helen was a charming, well-adjusted adolescent, but her severe reading and spelling disability and one response on the Rorschach test indicated some serious disturbance of what otherwise seemed to be a healthy personality [37, p. 133].

Reading difficulties in this case may be considered as symptoms of underlying emotional tensions that blocked learning.

It seems, therefore, that these failures in the language arts, no matter which personality syndrome they show, are basically insecure, worried, anxious children who are more concerned, often on an unconscious level, about basic emotional problems in their lives, than they are about the difference between a "b" and a "d" or between "was" and "saw." As one very immature ten-year-old boy said in one of his therapeutic sessions, in which he frankly verbalized about his jealousy of his preschool sister, "I just can't wait to get home from school to see what my mother and sister are doing. I'm afraid they will do something behind my back. I just can't think with all these things on my mind" [20, p. 33].

Pattern 7. Parental attitudes, social pressures, and poor social adjustment may result in an overemphasis on reading which interferes with the development of a healthy personality. Wollner [44] described in detail such a case.

Initially testing high in mental ability, Joan had attained by 12 years 8 months a mental age of 17 years 2 months, IQ 183, and a score of 113 on the Iowa Silent Reading Test, the highest in her class and equivalent to a percentile rank of 99 in grade eleven. Her own comment, "I read everything. I can tell if it's good, but I read it anyway. . . . My reading is and always has been almost omnivorous, if not quite," was borne out by her reading record. She entitled her reading autobiography, "Bred on Books." Her preschool years were rich in intellectual stimulation; very poor in human relations. She early turned to books as a solace. Unsuccessful in making friends in school, and lacking social acceptance by the group, she withdrew still further into books. In the fourth grade she was very unpopular; in the seventh and eighth grades she was respected for her mental ability, but was not a participant in the social life of the group. This unusual case illustrates how excessive reading as well as retarded reading may be a symptom of personality disturbance [37, pp. 133–134].

There are innumerable variations in the patterns of causation that underlie both reading and personality problems. In fact, each case is unique. However, the experience of clinical workers will help other persons concerned with reading improvement to gain a better understanding of the individual with reading and personality problems, and to create more favorable conditions for him.

THE ROLE OF THE SELF–CONCEPT

Many reading cases feel hopeless about themselves and about learning to read. We get clues to their feelings in such comments as these:

"I can't read, I can't write, I can't learn words."

"I just can't get the words, I guess at them and then they are wrong."

"I'm the black sheep of the family; I guess every family has to have one black sheep."

Such self-concepts are learned. They are built up in many subtle ways. They derive, in part, from the negative comments of parents, teachers, and classmates and from repeated experiences of failure. The child or young person becomes fearful of making mistakes, afraid and ashamed to be wrong again. Self-confidence, on the other hand, derives from the positive expectancy of others that the individual can close the gap between his present performance and his potential; it is reinforced by experiences of success.

The individual's approach to reading is profoundly affected by his self-concept. By helping students to change their self-concepts we can help them to change their ways. However, this is easier said than done; one's self-concept is deep-rooted and persistent. It can be changed only by repeated experiences of success. The role of the reading teacher is to provide materials and instruction that will enable the student to see his own progress and gain recognition and approval from the persons who are significant in his life. In a study of the members of a college reading class, Roth [28] reported significant differences in the self-perceptions of those who improved, those who did not improve, and those who dropped out of the course. It seems that both those who achieve and those who fail to achieve "do so as a result of the needs of their own self system" [28, p. 281].

REFERRAL OF CASES

The manner in which the student is referred to the reading specialist or clinic largely determines the success of the first interview. The reading service should be presented to the individual as an opportunity to understand himself and his reading—to find out how he reads, what is preventing him from reading better, and how he may improve. He decides whether to take advantage of the opportunity. The attitude of teachers and other students toward the reading service determines its reputation. And its reputation grows with each successful case. Those who are scheduled for individual work should never feel inferior or deficient because of the referral.

The recognition that a reading difficulty is accompanied by emotional disturbances does not necessarily imply that the case should be referred

to a psychologist or a psychiatrist. Most problems are not severe enough to warrant this [4]. They can be treated by the psychologically oriented reading specialist. Over a period of time he helps the individual to gain some understanding of the conditions that are contributing to his reading difficulties and to learn techniques for handling them. However, if the emotional problems are beyond the area of the reading specialist's competence, referral is indicated. If the requisite service cannot be obtained within the school system, the specialist should investigate community resources, such as a nearby university, a mental hospital, or a county or state cooperative board.

INITIAL INTERVIEWS WITH PARENTS

A student is frequently referred by a parent, a counselor, or a teacher who is concerned about his reading. If the adult comes with the client in his first interview, the adult should usually be interviewed alone. Otherwise he may pour forth all his criticisms of the child in the child's presence and thus intensify his feeling of inferiority and inadequacy. Such an introduction makes it more difficult for the worker to win the client's acceptance and confidence.

When the worker interviews the adult privately, he may obtain considerable understanding of the case. In an interview with the intelligent father of a tenth-grade pupil the worker learned much about the girl's reading problem. Mr. R had brought his daughter to the reading center for a study of her reading difficulty. The worker gave him the opportunity to present the problem in his own way by asking what it was that concerned him.

Mr. R: She reads very slowly and, in fact, far too slowly to get anywhere with her studies or anything of that sort. She passes her work, but it requires a great deal of her time on those things where there is much reading involved. We know that we should have done something about it much sooner. In her last year in grammar school she came home and reported to us that in the reading tests they had given at the school, she was far below the average of the class and her speed of reading in the eighth grade was the equivalent of the fifth- or sixth-grade student. . . . We thought at first that it was mainly because she hadn't done as much reading as she should have. When she was much younger, she was constantly urged to read more. She didn't enjoy reading and probably the reason for it was that she read slowly. By the time she got anywhere, she'd lost interest. . . . I think she is a bright enough child. . . . As the matter stands now, she is just not able to complete the homework assignments that she is given.

Worker: Does that upset her? Does it bother her when she can't do them?

Mr. R: Well, naturally it does. She is conscientious. It isn't that it's causing a psychological difficulty if that is what you are driving at. I don't think it is causing her to become a psychological misfit.

WORKER: I don't mean anything abnormal. Worry does take away from one's energy. It is energy spent in a not very fruitful way. If she worries, then it takes energy away from her work. . . .

MR. R: There is also the factor that the family may be farther away from New York in the spring. So we are anxious to have an examination and recommendations as to what should be done.

WORKER: Those things make a difference in how to approach the problem.

MR. R: I'm sure that anyone making the diagnosis would have her complete cooperation. I think she is much older in her actions than most. She is more mature.

WORKER: What makes you say that? Could you give me a better idea?

MR. R: She takes much greater individual responsibility than most girls do. She is quite a leader. I think it is because of home environment. She is the youngest of four and enters into the family conversation on social, political, and other subjects.

WORKER: Is she the only one of your four who has had difficulty with reading?

MR. R: Her sisters and brothers who went to the school to which she is now going made excellent records for themselves, and I do believe that she is under pressure a bit because of this.

WORKER: They made standards for her to follow? Is that it?

MR. R: Sometimes the teachers throw it up to her. Even now, although it is some years since her sisters were there, some of the teachers that knew them expect wonderful things immediately upon seeing her in the class. One sister was valedictorian. Both sisters are not only very capable in schoolwork, but were also leaders in extracurricular activities and were very popular there.

WORKER: Is there anything else that you think would be of help for us to know?

MR. R: No, I think I've probably described her as well as I can. I do think that you would agree with me that she is much more mature than her age indicates. . . . Her interests are quite mature. Of course, we have quite a group of young people about the same age. She conducts herself with much more decorum than the average. I mean, where it is necessary, for instance, almost to step on the necks of some of the kids to maintain any discipline, she will be the one to maintain the discipline. She has a more mature interest. She will take an interest in such things as a housing problem or a social problem, or things that the average person of that age isn't concerned with, and she will be able to discuss them fairly intelligently.

WORKER: Thank you very much for explaining it so clearly, and I'll write to you soon.

MR. R: I'm happy to have had the chance to talk it over with you.

This conference with the father brought out factors that might be related to B's reading difficulty. Perhaps the father overcame some of his anxiety by talking about B objectively to an understanding listener. He obtained an idea of the nature of the service offered and could present it to B in such a way as to win her interest and cooperation. He also ob-

tained the necessary specific information as to time, place, and fees. At the end of the interview the worker's word of appreciation strengthened the friendly relation that had developed during it.

In single conferences parents often pass through three phases. First they pour forth a flood of negative comments about everything that is wrong with the child. In this phase the parents are usually thinking of themselves and their disappointment that the child is not being a credit to them. If the interviewer is able to direct attention to the child by skillful interpretation, the parents will often begin to speak of some of the child's good qualities. Toward the end of the interview they may, with or without the interviewer's suggestions, decide on one or two desirable changes they can make in their behavior. Even though this is all that can be accomplished in the single contact, it often produces good results with parents who are genuinely fond of their children. They may begin to shift the focus of their attention from themselves to the child; they perceive him differently. And when later they make some favorable change in their behavior, they set up a beneficial circular response—the child responds to their changed behavior and they, in turn, respond to the improvement in the child.

INITIAL INTERVIEWS WITH CLIENTS

There is no one best approach. The approach varies with the client and also with the personality and orientation of the worker. Every individual has different expectations and different needs. Some are antagonistic to reading or deeply anxious about their inability to read. The worker encourages them to bring these negative feelings out in the open, as in this first interview with Jim, a nineteen-year-old boy.

JIM: I have to learn how to express myself. I just can't express myself. . . . I always stress the least important thing. I read slowly, very slowly. (Pause.) But I get down to it. A lot of times I do! I am at my desk for hours but I can't concentrate.
WORKER: What are you thinking about when you can't concentrate?
JIM: Everything I have to do is on my mind until I finish it. . . . I have great satisfaction in finishing things. I like to finish things and be prepared for my work. If I go to class unprepared, I concentrate on being afraid rather than on what goes on in class. (Pause.) So, you don't know what to say if the teacher calls on you. And if he doesn't call on you, you're listening to what they're saying but you don't know what they mean.

Fears and anxieties are somewhat alleviated if they are discussed in a secure relationship. This also gives the worker a better understanding of the problem. If the client's fear of reading is very great, the worker may give him a visual screening test in order to establish a friendly relation

without bringing into the present situation the emotional feelings associated with previous failure in reading. Boys and girls usually respond with interest to these tests. Some clients forget their anxieties and gain new hope that improvement is possible as they turn their attention to visual factors or use an unfamiliar gadget.

An approach that is effective with individuals who like books is to place on a table a number of books on different subjects and on varying levels of reading difficulty and let the client browse through them; meanwhile the worker busies himself with something else, but also notes the client's responses. After the client has examined the books, he may be asked to read a few paragraphs from the book he has selected. If he reads this fluently, he can be tested on a more difficult book until his level of reading ability is approximately ascertained. This procedure is also valuable in establishing a friendly relationship and in supplying information on reading interests and attitudes. Discussion of these books may lead to conversation about the student's interests in general, the way he uses his time, and his reading difficulty as he sees it.

If the individual comes with the idea that he is to take reading tests and find out what his reading ability is, the worker may begin the interview with an oral-reading test and follow it with a silent-reading test. If time permits in this interview—or if not, in the next—the worker can score the tests with the client, study the errors, encourage him to figure out how he happened to make these errors, and give him a few suggestions as to how to read this kind of material more effectively. The client's interest in his test results often increases his eagerness to do something about them.

A mature, intelligent student may want to spend the first interview thinking through his reading problem for himself. The role of the worker then becomes that of a sympathetic listener who occasionally asks a question or offers an interpretation when the client seems ready for it.

A good approach with seriously retarded readers who are deeply discouraged about their reading but very anxious to improve may be to give them the experience of success in the first interview. This was done in the case of a boy seventeen-and-a-half years old who had good oral vocabulary and conversational ability but was practically a nonreader. Excerpts from the first interview follow:

WORKER: Mr. L tells me you're interested in learning to read.

E: Yes. I'll be in the Army in about five months, and every time I go for a job, I have to do some reading and writing.

WORKER: Tell me some word in which you are particularly interested.

E: Guns, I guess. Guns are my hobby.

WORKER: Fine. Let's learn to write *guns*. (Worker writes "guns" with crayon in large letters on card. E traces letters with finger, pronouncing the word correctly as he does so. He repeats this process several times— Fernald

method.) Now you can write it without looking at the copy. (E writes word correctly.) That's just fine. Now let's try *are*. (E traces this word four times and then writes it correctly. He does the same with *my*.) The next word is *hobby*.

E: Oh, I don't think I can do that one.

WORKER: Sure you can. Try it. (Worker pronounces it clearly in syllables as she writes it. Then E traces it five times.)

E: Now I think I can write it. (Does so correctly.)

WORKER: That's *very* good. Do you want to write it again without looking? (E does so correctly.) Now you know the whole sentence. You can write it all now.

E: Without looking?

WORKER: Sure.

E: O.K. (Writes entire sentence, omitting *my*.)

WORKER: You left out one word. (E puzzles over it a few minutes and then inserts *my*.) That's just fine! You didn't make one mistake.

E: Gee! Ain't we got fun! (E goes on to tell about making a collection of gun catalogues.)

WORKER: That would make a good next sentence to learn, wouldn't it? *I am going to make a collection.*

(Following the same procedure, E learns all the words up to *collection*.)

WORKER: That's splendid. You haven't made a mistake yet. Now try *collection*.

E: That's hard.

WORKER: (Writes it and pronounces it distinctly by syllables and E practices as before.)

E: Now I think I can do it. (Begins, but finds that he can't do it.)

WORKER: That's all right. If you trace it several times more, you'll be able to do it. (They study the three syllables, noting where the *tion* starts. E writes it correctly.) Good! That's perfect.

(They talked for a little while; E told about his collection of matches and the collection of gun catalogues that he had made while he was in the hospital. He had been hospitalized for a number of years for infantile paralysis.)

WORKER: Would you like to write another sentence today about getting the catalogues or would you rather wait until next time?

E: Let's go. (Using the same method, he learns the words of the next sentence — *I had catalogues from every gun industry in the country*.)

WORKER: Now, for the whole sentence. (E writes the first two words and hesitates on *catalogues*.) Just skip that and go on with the rest of the sentence. (He finishes the sentence correctly except for putting g instead of n in *gun* and *nu* instead of *un* in *country*. After practicing *catalogues* again, he writes it correctly.) Now the sentence is 100 per cent perfect. Will you file the cards while I have your three sentences typed?

E: Sure. I know how to file them in the card catalogue. (He does this correctly.)

(The worker had the three sentences typed in booklet form with the title "Guns" and the boy's full name on the outside page. The "book" read—

Guns are my hobby.

I would like

to make a collection.
I had catalogues
from every gun industry
in the country.)

WORKER: Now, here's your book in typed form. Let's hear you read it just as though you were talking to me. (E reads it fluently and with great pleasure.) (They talked for a few minutes about skeet shooting. The worker was interested and said she had never known so much about that before.)

E: Gee, you learned something, too.

In this interview the objective was to help E acquire an initial feeling of confidence and success in reading and writing, beginning with words of special interest to him. Thus he would gradually acquire a basic sight vocabulary. By using his own conversation as reading material, he gained a sense of reading fluency. His interest and enjoyment in the learning process were indicated by such comments as, "Ain't we got fun!" which was repeated several times, and, "Now I think I can do it." The casual conversation about his interests and future plans not only prevented fatigue but helped to give E a sense of direction and a more accurate and hopeful appraisal of himself. The Wechsler-Bellevue test indicated that this nonreader had potential ability to read at about the fourth-grade level. The changed self-concept that arose from the counseling relation and from his success in learning to read made it possible for him to realize his reading potentialities.

The client may gain understanding of himself by trying to express his thoughts and feelings. This is illustrated in the case of Gene. Despite the counselor's overinsistence that Gene think things through himself, the boy nevertheless was able to analyze his reading problem far better than he had thought possible. Here are a few excerpts from the first interview.

WORKER: Well, suppose we begin by your telling me why you're here, Gene.
GENE: Well, I guess I'm here to learn something—how to read.
WORKER: What else?
GENE: That's about all I know.
WORKER: How do you feel about coming here?
GENE: How do I feel about coming? Let's see. I don't know what to say. . . .
WORKER: What are you thinking?
GENE: I'm not thinking of nothing now. Just relaxing. . . . What do you usually teach the children?
WORKER: It depends on what they need. You would need some things; others would need something else. That's the way it goes.
GENE: Yeah.
WORKER: That's why I wondered if we could get at what you feel you need.
GENE: You know, it's funny. Sometimes when I'm reading there isn't any word there. I put 'em in there, like small words, like *we* and all that.
WORKER: You stick them in?
GENE: Yeah, it sounds better to me. . . .

WORKER: Tell me more.

GENE: Sometimes when I'm reading there I come to the end of the sentence. You know, instead of stopping for a few seconds I go right on. When I come to a question mark, I just keep on going. . . .

WORKER: That's good to know. You notice these things yourself?

GENE: Yeah.

WORKER: What else have you noticed?

GENE: Let me think. (Pause.) Sometimes I'm reading . . . a word like *there* and *their*. I don't see the difference there. So they both sound the same to me. . . .

WORKER: Uh-hum.

GENE: Of course, there's one thing I don't like. When you're reading out loud, and come to a word and you can't pronounce it, and the teacher tells me what it is.

WORKER: Oh yes.

GENE: I'd like to figure it out myself.

WORKER: How do you feel when this happens?

GENE: Well, with the kids in my class I don't feel much ashamed, 'cause they can hardly even read. Some of them can't read little words. It's true that when you're reading, you get all mixed up, like oh, some of those little words.

WORKER: Sometimes little words are more troublesome than big.

GENE: Yeah. Big words you can get little by little.

WORKER: Those were very good observations. Not many people can see their own reading as clearly as that. Anything else you can think of?

In the course of this interview the boy made progress, which became apparent to him as the worker praised his efforts to understand his reading. This newly acquired skill in thinking about his problems was more important than the actual information gained.

Some clients are too much disturbed emotionally to begin work on the reading problem. Initial interviews with these cases focus on why they are coming for help; how they feel about themselves, their families, and school; what they are thinking. Ways in which this can be done skillfully are effectively shown in four initial interviews presented and discussed by Ephron in her book *Emotional Difficulties in Reading* [10], a *must* for everyone who wants to improve the quality of his reading casework.

These are only a few examples of the great variety of possible approaches to individual reading difficulties. There is no general principle, except sensitivity to the person who is being helped to realize his best potentialities. The objectives of the first interview, in general, are—

To establish a friendly relationship

To feel with the client when he indicates anxiety about coming for help or shame about being teased and laughed at because of his poor reading

To gain some understanding of his reading difficulty, oral vocabulary, and interests

To obtain some clues as to the reasons for his retardation in reading

To be sure that the client has, at the end of the interview, a feeling of satisfaction and a sense of having accomplished something

These objectives may be accomplished in many ways. Try to make physical conditions, such as lighting, pleasant and comfortable. It is good practice to sit beside the client rather than across the table from him. It is most important in any interview to treat him with courtesy and consideration; let him present himself and his reading problem in his own way; encourage his spontaneous comments; be continuously sensitive to his feelings, such as anxiety about being different or deficient; and be relaxed and confident, not insecure about your ability to help him. If the client feels anxious or associates you with repressive authority, it is necessary to describe or structure the situation, briefly explaining your role.

SUBSEQUENT INTERVIEWS

The interviews following the first contact will be as diverse as the needs of the clients. Many different approaches are presented in the detailed reports of cases which are given in the references at the end of this chapter. Here we shall get only a few glimpses of reading cases.

Use of the Reading Autobiography (see Chapter 14). A history of the student's reading development as he views it—either orally or in writing, depending on which avenue of communication is preferred—often throws light on the best procedures to use. In some cases the autobiography may be limited primarily to reading per se; in other cases, as in the following, the child's interests and family relationships have a most important bearing on her reading development.[1]

Fifteen years ago a baby girl was born to a school principal and his wife. When the baby's sister, who was about ten, first viewed this little red ball, her reaction was a grown of disappointment. That homely, red baby was I.

Of the town of my birth I remember very little as we soon moved to another town. There I played in our great, big yard for four years. I had short, straight hair and was seldom seen, when not wearing overalls. I did not play with girls, as boys games, and toys appealed to me more. The boy across the street, was my best pal. We played with his electric trains and made airplanes together.

I played mostly with boys until I was about eight years old when I joined the Sunshine Club. It was a girls' organization. They served cocoa every meeting. That was the only reason I attended. It was always I that would not obey. Probably this was dew to the fact that the heads of the organization always told me to set a good example as I was the principal's daughter. I resented this very much and still do.

[1] The same fifteen-year-old girl was referred to in the conference with her father earlier in this chapter. Spelling, punctuation, and style are unchanged. Names have been changed and identifying details omitted.

I attended public school for eight years. I always had a dislike for education and teachers. Consequently, I would never obey them. I walked out of the class several times. I was sent out of classes by three different teachers. One teacher literally through me out. She took me by the neck, opened the door and gave me a shove. I can not account for my attitude toward teachers, except that one kept me untill four thirty, after school, telling me I should be good because of my father's position.

I have been brought up in a family that is mentally allert, a family of broad minded people. I have always eaten at a table at which, problems of economics were discussed often. I've heard my brothers discuss contriversial subjects by the hour. It is only natural that I too would be somewhat interested in these things.

When I was fourteen one of my sisters was engaged to be married. She asked me to be Maid of Honnor. The wedding was held in the church, I received my first evening dress and high heals. I had a permanent wave too. You would not have known me that day. At the wedding I met a boy who invited me to attend a formal dance with him. It was my first dance. That summer he took me other places too. By fall practically all of my tomboy characteristics had vanished. I believe my sister's wedding was the beginning of a great change in me.

Now I am in high school. There are a great many things I regret. I wish that I had not waisted my time, fooling in grammar school. If I could live those years over, I would attend school with the purpose of obtaining everything I could possibly receive from it. I would spend my spare time reading masterpieces and not trash. . . .

Within me there seems to be a desire to serve man-kind. I would like to do Social Service Work. If I did this, it would put me in a better position to do my part in abolishing slums. I realize this is a hard, depressing task. I would like to give those people an ideal, a reason for living well. Perhaps to some of the homes I might bring a note of Religion. I feel that the making of a man, and of a nation is based upon a strong, enduring faith in God.

Social Service or perhaps Religious Education work, would be the occupation I would choose if any. But I don't think I am unlike any other girl, when I would like to have a home. Most any other person would like to own there home, and bring up a family they can be prowd of. This is something of course that cannot be counted on therefore I will train myself for Social Service. Unfortunately the future can not be foreseen.

In this autobiography the need for instruction in spelling first attracts our attention. Since the client recognized poor spelling as an academic handicap, she was glad to work on the words she misspelled in her written work and letters. The autobiography also indicated emerging interests and motivations which would make her receptive to reading instruction. A psychologically astute counselor might infer that she feels resentment toward people who want to make her different. Her interest in social service might stem from a personal need, or reflect normal adolescent

idealism. The worker began by trying to meet the girl's desire for help in reading and spelling, but was also alert to clues that might lead to a counseling relation.

Use of Tests and Observation of Client's Reading. If the client wants an appraisal of his reading, tests may be given. Standardized tests may be used more flexibly in a clinical setting than in a group, as the aim is to study the reading process. By means of analysis of the client's errors, and his reflections on the causes or conditions that gave rise to the difficulties, worker and client both gain insight into the reading problem. Specific instruction may also be based upon the analysis of test results.

Observation of the client as he reads an assignment accomplishes several ends. It helps both worker and client to understand the reading process; it gives the worker opportunity for specific instruction; and it helps to lighten the load of an overburdened student.

Introducing Instruction and Practice. In most cases there is a place in the interview for instruction in reading or the other language arts. When a student is worried about his poor marks and fears failure, he wants expert help in reading and study methods. He is willing to talk about his problem up to a certain point; then he becomes impatient and wants to know what to do. Giving the instruction he needs helps to relieve his immediate distress. For example, in an interview with B, the worker asked her what she would like to do next; B laughed, a little puzzled, and said she would like to know whether to begin trying to improve her spelling or her reading. The worker suggested the following procedure which she could use independently to improve her spelling:

1. Ask someone to find the misspelled words in your letters and written work, and make a list of them, all spelled correctly.

2. Study each of the misspelled words. Pronounce each correctly: write it one syllable at a time, saying the syllables distinctly as you write them; note the parts of the word that are hard for you and give special attention to them; write the word several times to get the feeling of how it is written correctly; close your eyes and write the word the way you feel it should be written, then check to see if you are correct; close your eyes and see if you can see how the word looked. When you are sure that you know how to spell the word, write it and check it for correctness. Practice until you have written the word correctly without help at least three times. Test yourself again each week until you never make a mistake.

3. Form the habit of looking closely at unfamiliar words; break them into syllables that you can spell easily.

4. If certain letters or letter combinations give you special difficulty, make a column for each and fill the column with words that contain the troublesome letters, being sure that each is spelled correctly, for example, the following:

oa	al	a	ou
groan	alert	permanent	proud
moan	alternate	testament	loud

5. Play word-building games—anagrams, crossword puzzles—combining small words that you know into larger words.

6. Overpronounce some words that cause special difficulty:

perm *a* nent

priv *i* lege

Overburdened students especially appreciate instruction that is given in connection with their school or college assignments. For example, Miss M brought a book on which she was to write a report.

MISS M: I have read this book quickly and I think I know what is important, but I don't know how to write a review.

WORKER: What is your purpose in writing this review—to give (a) an abstract of the book, (b) a discussion of its theories and their relation to the problem you are studying, or (c) an appraisal of the author's style and his contribution to his field?

MISS M: I think the second purpose best describes the kind of review called for here.

WORKER: Then suppose that you begin by writing in outline form the central ideas that stand out in your mind as you recall the book.

When Miss M proceeded to recall the main ideas, she showed some tendency to enlarge on trivial points. The worker questioned the latter and thus helped her to see their subordinate relationship. She wrote the report later, and said that it was the best and easiest review she had ever written.

In another period Miss M expressed dissatisfaction with her newspaper reading. "You see, I don't actually have time to read my newspaper thoroughly. I'd like to have help on that, because I feel that so many important things are happening and I'm just not 'up' on them." The worker asked her if she would like to appraise her newspaper reading and radio and television listening according to a form used for analyzing attitudes toward reading and listening. This they did, the worker asking the question and presenting the choice of statements and Miss M replying orally:

In your news reading which of the following most nearly describes your attitude?

1. I accept what I read without question.
2. I consider the reliability of the news presented.
3. I sometimes recognize bias in the presentation of facts.
4. I form, revise, or test my opinions by what I read.
5. I am conscious of emotional overtones in such words as: (a) "free enterprise" (b) "capitalism" (c) "monopolies" (d) "C.I.O." (e) "coal strikes" (f) "radical."
6. I skim (name) sections of the paper.
7. I read (critically) _____ sections of the paper.

(carefully)

(analytically)

8. I read newspapers, weekly news magazines, and non-fiction articles in other magazines. (Underline which you read.)

> for information
> for cultural development
> to increase my value as a contributing citizen.

9. I seldom read the _____ section of the newspaper.

10. I usually spend ___ minutes each day reading the newspaper.

> ### What I Get from Radio
> ### and Television

I listen to news broadcasts on radio and television _____ times a day. I see a newsreel at the movies _____ a week.

I usually try to hear (name of commentator)

because _____.

From this analysis, Miss M discovered that she did not cover enough ground because she read everything with equal care. She also did very little critical reading. Without a purpose for reading and listening, she did not select and remember important ideas.

The session on reading the newspaper was apparently very effective, for in the next interview Miss M said, "You wouldn't believe it, but I never enjoyed reading my newspaper before. *Now that I have a plan, it's fun."* She read in five minutes a one-column editorial and made an excellent abstract of it. Her rate of reading was about four hundred words a minute.

The question might be raised: Why use interview time for instruction that could be given in a group? To be sure, the kind of instruction described here can also be given in the classroom. But many students learn best in the highly personalized relation with the reading teacher. In the case of Miss M, instruction and practice were given in response to her recognized needs. These needs were uncovered informally through conversation, through her introspective reports on the reading processes she was using, by analysis of her errors on tests, and by observation of her methods of reading different kinds of material. This diagnostic process was accompanied by instruction and practice so that from the beginning the student felt she was gaining skills immediately useful to her. To use some of the interview time doing class assignments is particularly helpful to students carrying heavy schedules; getting some of their studying done during the interview period helps to decrease their anxiety and tension.

Including Other Procedures. Almost any procedure may be woven into an interview. The reading counselor needs a repertory of techniques and methods which he can use or adapt as they are appropriate and useful in the individual case (see Chapter 14). The counseling situation is complex; it involves constant interaction between the client and the worker. Thus, a procedure that is successful in one case may fail in another. This is because of differences in the personalities involved.

Getting Information Needed to Make and Do Things. With a non-academic youngster who comes to the reading center with a strong aversion to reading, the opportunity to make a model airplane, construct a reading game, make a bookcase for the reading room, or engage in some other activity that does not involve reading is often disarming. Working with this client on something he can do successfully is an effective way of establishing a friendly relationship. Moreover, out of activity grows a need for reading—to make a model plane requires ability to read directions; to make a reading game involves writing and understanding certain words. And what good is an empty bookcase! Beginning with an interesting activity is one of the best ways to demonstrate to reluctant readers that reading has meaning, use, and purpose for them.

Finger Painting and Clay Modeling. For some clients, finger painting or the free use of any plastic material helps to relieve tension; it provides an outlet for suppressed feeling; it also gives the psychologically trained worker clues as to emotional factors that are contributing to the reading disability. Finger painting is a medium of expression, a way of saying things, a conscious or unconscious manifestation of personality, a starting point for free association. An individual will frequently express in the painting things that are bothering him in reading, in school, or in his family relations. The worker notes the way the client approaches the finger painting, whether gingerly with just a small dab, or in a big way with a great gob of color. He may derive some meaning from the lines, rhythms, colors, and content of each picture or from the recurrence of themes in a series of pictures. He may learn most of all from the free associations stimulated by the projective media.

Puppetry. In work with individual cases as well as with groups, puppetry may contribute to the improvement of reading. In addition to possessing the values mentioned for finger painting and clay modeling, puppetry is especially useful in helping the emotionally disturbed child to express himself verbally. Several other children may be invited to share the interview time so that he may give a certain puppet play. The spontaneous use of puppets also gives the worker more understanding of the content of the client's mind. The following excerpt from an original puppet play by emotionally disturbed boys shows how remote their thoughts may be from the polite, childish content of the usual reading material on their level:

<div align="center">SCENE ONE</div>
<div align="center">(Man Standing beside Table)</div>

Participants: Radio Voice, Man, Bookie, Woman

R: There is a blizzard. People are snowed in. We must fly food to them. (Man moves away from table.)

M: I got to get some money to send to my family. They are snowed in. Where can I get money? I'll find a bookie.

(Man exits as two other men enter.)

M: I want to place a bet, Bookie.

B: How much? (Man runs as a woman enters.)

W: How did you become a bookie?

B: Widow Brown, it goes way back to when I was a "wittie-bittie" child. I was hungry, Widow Brown.

W: Why don't you sing for money?

B: I can't, my voice is froggy. Listen. (He sings in a deep voice.)

When Al started to sing, Charles who had been observing the show, started tap dancing and clowning to the tune that the bookie in the puppet show was singing. There was no complaint from Al, who continued as if he were the only person in the room [27, p. 58].

Although puppetry lends itself best to small groups, it may sometimes be used effectively in individual conferences. With a hand puppet, a child may communicate to the worker thoughts and feelings he could not express in his own character. Doing this helps him to accept and clarify his feelings and work out acceptable ways of behaving.

Dramatization. Like puppetry, dramatization lends itself best to group situations but can be used in individual conferences. Dramatization may take many forms: the reading of parts in a story, the reading of published plays, the reading of plays written especially for the client, and the acting out of original plays written by the client or transcribed from a role-playing situation. Dramatizing a story with the worker gives the client an opportunity to follow the worker's correct phrasing; it also gives him a stimulus to read with expression the conversation of the character he has chosen to represent. Dramatizations that deal with personal problems often serve as a springboard for bringing out the client's feelings about his own problems. There are now available some mental-hygiene [36] and guidance plays [43] that contribute both to reading development and to personal development through reading. Role playing may be used effectively to help a client work out realistic ways of handling life situations.

Experience Reading. With reading cases of any age the procedure of having the client relate an interesting experience which the worker records and later types has repeatedly proved effective (see Chapter 9).

Games. For preadolescents the game interest is strong. The worker can take advantage of this interest to increase the client's satisfaction with the period as a whole. One or more of the other young clients may be invited to take part in the games.

Finding the Right Reading Material. With clinical cases, the improvement of reading depends to a large extent on finding suitable reading material (see Chapter 18). Workers must often spend a good deal of time looking for, or even writing, material that will meet the needs of an individual. For example, when one nineteen-year-old boy who was reading on the second-grade level expressed an interest in the Navy, the

worker gave him the *Navy Life Reader* [23], which he could read successfully. Another worker gained rapport with a Puerto Rican boy who could read Spanish but not English by giving him a simple story with some Spanish words and phrases interspersed through it. Since the worker did not know Spanish, the boy assumed the role of teacher when they came to the Spanish words. Another boy, who was keenly interested in snakes and reptiles, felt that his worker really liked him when she took the trouble to find interesting books on this subject. Many workers take time to rewrite newspaper or magazine paragraphs that are of special interest to the client, or to write original stories and practice material.

The Wire or Tape Recorder. This piece of equipment may be used in many ways. For example, Mary Ann read several stanzas of "The Lady of Shallot" in her usual singsong, expressionless way. Then she was given a little instruction in oral reading:

To see pictures in her mind's eye of the river, the castle, the people going up and down, etc.
To say the lines as though talking with someone in a conversational way
To carry over the idea from one line to another
To stress and hold on to the words that seem most important
To read each phrase as a whole, not as separate words

After practicing the poem in this way she recited it for recording; when it was played back she was delighted, for her voice was clear and young and expressed the feeling of the poem. Recordings may also be used to take before-and-after pictures of the client's interpretation of passages of different kinds. For the worker, the recorder is an invaluable aid to the objective study of his interviewing technique.

A Chance to Be Creative. We have described only a few procedures that have proved successful in reading interviews. The worker has infinite opportunities to adapt these or to devise new ones. However, any procedure should have the sanction of sound theory and should be geared to the interests, needs, and ability of the individual client.

PSYCHOTHERAPEUTIC INTERVIEWS

In some cases emotional difficulties have prevented the client from learning to read; in other cases they are preventing him from using the reading ability he has; in a few cases they are making him inaccessible to reading instruction at present. Consequently, emotional difficulties must, as far as possible, be recognized, consciously faced, and coped with in a rational rather than an irrational way. While meeting the client's expectation—and that of his parents—that he will receive instruction and practice in reading, the worker who is qualified to delve more deeply into emotional involvements will use much of the interview time for this purpose.

The detailed records presented by Ephron [10] show how certain of the emotional difficulties that are related to reading may be handled by a worker with a warm personality, an understanding of the dynamics of behavior, and skill in interviewing. Although each case is unique, many follow a common pattern: first the client expresses general surface symptoms of reading difficulty, then he gives a more detailed analysis of his reading problem, and finally he reveals to some extent his unconscious fears and motivations—fear of making decisions, of taking initiative, of competing with his father or his siblings; compulsion to do everything perfectly, or to repress his real feelings or his true self-image. In speaking of one case, Ephron said:

The major contribution of therapy was to help him uncover and understand these feelings. The counselor helped him by encouraging him to explore his true attitudes without guilt. Setting up a permissive atmosphere meant conveying to Ralph the idea that the counseling room was not a court of judgment; that he was not pronouncing sentence on his parents, peers or teachers; that whatever he said here could bring harm to no one, including himself. He began to understand that hostility repressed out of conscious awareness could cause more trouble than hostility clearly seen and consciously controlled. He understood that he could permit himself to sense his true feelings without having to express them hurtfully or unwisely. He shifted his focus from a wish to change his parents to a desire to understand them for the purpose of obtaining a new understanding of himself in relationship to them.

The therapist attempted at every opportunity to support Ralph's self-affirmation, not through reassurance but through clarification of his blind obedience to authority, his hidden resentments, his self-defeating trends, his feelings of hoplessness. As his fears lessened, he derived courage from within himself to take chances based on his own judgment and wishes. In the seventh interview he recognized that he could incorporate within himself the "new way of thinking," and that he could claim this "new way of looking at things" as a tool of his own, not something for which he must depend on the therapist. . . . In the fifteenth interview he stated succinctly one of the interesting phenomena of therapy: "That's the funny thing about this. This is the kind of thing that has to come from within you" [10, pp. 266–267].

The question may be asked: Can therapy and reading instruction be interwoven? Perhaps not, in the most serious emotional disturbance. However, reading instruction is "often unavoidable in a reading center. When this is so, the therapist can find ways to weave it into the situation in a manner that keeps the atmosphere permissive and therapeutic. Sometimes the skillful employment of reading techniques may implement the therapeutic process" [10, p. 268].

What does the therapist do? He gives the client his full attention, undistracted by telephone calls and other interruptions. By his voice, facial expression, and expressive movements, he encourages the client to try to understand himself. Comments such as, "Tell me more," "Yes?" "And

then?" "And how did you feel?" and "What are you thinking?" evoke the client's efforts to clarify his problems. The therapist listens creatively and with the "third ear," seeing relations that the client has not recognized, sensing ways of coping with the situation that the client has not found. But he does not rush in with suggestions for a solution; that would defeat his aim of helping the client learn how to think about himself. He is constantly alert to recognize clues to the client's difficulties, but he gives his interpretation only when he feels quite sure that he is right and that the client is ready for it. He also helps the client to see his needs in relation to the needs of others. As the client learns to cope with some of his emotional difficulties, he is free to attack his reading and study problems. When this happened in one case, the boy said, of his own accord, "Hadn't we better get started on this reading business?"

THE COMPREHENSIVE CASE–STUDY APPROACH

The case study is the best method we have at present of understanding the individual as a whole. It helps us to appraise the growth that the client achieves by means of reading, as well as his advance in reading ability. It shows the conditions within the individual and in his environment that combine to produce certain kinds of development.

The trend in case studies of reading difficulty is to start with the person as he wants to present himself, and to use whatever approach and techniques may be helpful to him in moving toward emotional maturity and realizing his reading potential. Thus the case study unfolds as the worker continues with the client. The real difficulties lie in understanding the dynamics of the case and in translating into practice the understanding that is obtained.

Following is a report form developed in the reading clinic serving the Philadelphia schools:

OUTLINE FOR REPORT FOLLOWING READING ANALYSIS [2]

I. Identifying data
II. Tests administered and scores
III. Interview with parent; with subject
    A. Time of arrival; general attitude; speech pattern; other evidence of socio-economic background
    B. Reading problem as seen by parent
    C. Health and developmental history
    D. Relationships with other children
    E. Reading problems as seen by subject
    F. School
        1. Best-liked subject or activity

[2] Form developed by Dr. Helen Carey and Dr. Dorothy Withrow in the reading clinic serving the Philadelphia schools.

2. Least-liked subject or activity
3. Spelling
4. Arithmetic
G. Educational and vocational goals
H. Interests and activities outside of school
I. Subject's appearance; his interview and test behavior
IV. Significance of test results
    A. Skills
        1. Oral reading
        2. Silent reading
        3. Phonic skills
        4. Number skills
    B. Capacity
        1. Auditory comprehension
        2. Vocabulary
        3. Verbal intelligence
        4. Nonverbal intelligence
        5. Evidence of projective tests
        6. Lateral dominance
V. Prognosis
    A. Negative factors
    B. Positive factors
    C. Summary
VI. Recommendations
    A. To the principal
        1. Placement
        2. Retention in grade
        3. Further referral
        4. Candidacy for clinical instruction
    B. To the remedial teacher
        1. Methods
        2. Materials
        3. Professional reading
        4. Interests, skills, and abilities of subject which may serve to suggest
           approach to instruction
    C. To classroom teacher
        1. Methods
        2. Materials
    D. To counselor
        1. Direction guidance should take
        2. Participation in remedial instruction
        3. Educational and vocational guidance
        4. Further exploration of environmental factors
        5. Further referral
        6. Development of referral readiness in parent and subject
    E. To parent
        1. Discussion of test results
        2. Help parent may give

   F. To subject
      1. Discussion of test results
      2. Positive factors which may be emphasized

CONCLUDING STATEMENT

Throughout the preceding pages there are certain recurring themes. Reading occupies a prominent place in our culture and in our schools. Parents and teachers are much concerned about children's achievement in this field. Some children cannot possibly meet the grade standards set for children of their age, no matter how hard they try; some could meet these standards if learning conditions were favorable; some are reading up to grade standard but are still not realizing their potential ability. Those who cannot meet the reading standard set could gain the knowledge and skill they need through other avenues of learning.

Every individual should be helped to realize his total growth potentialities. It is therefore necessary to know how much progress in reading may be expected in an individual case, and to understand the factors that are blocking progress. In dealing with the infinite variety of personal factors that are associated with reading as part of the complex total development of the individual, the reading clinician or teacher should be flexible, sensitive, and adaptable. He should use the immediate concerns of the students as a springboard for reading instruction. He should also be sensitive to signs of fatigue and to a desire to talk about a personal matter, even though it may not be relevant to the material at hand. In the individual treatment of reading cases, the personal relationship is central. Techniques and suitable materials are means of enabling the worker to function more warmly, more understandingly, more effectively.

As all teachers become more competent in the teaching of reading, as parents gain more understanding of the nature of child growth and development, as the curriculum provides the experiences each pupil needs, and as pupils receive guidance in using these experiences to best advantage, the reading problem will disappear and each individual will progress in reading as part of his total development.

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PART IV
METHODS AND MATERIALS OF
APPRAISAL AND INSTRUCTION

CHAPTER 14

Appraisal of Reading Proficiency

"Here am I, after a glorious preparatory summer, starting a remedial reading department with no records of the mental ages of any of my pupils. ... Our reading instructors, anxious to get the reading program under way, are suggesting that they be instructed by the psychologist in the giving of one group mental test and one group reading test that would serve as a screening device for referring extreme cases to my office. Or should we not attempt the general testing program but depend on the observation and judgment of teachers for the referral of serious reading cases?"

This is a practical problem. It is not an either-or situation. Certainly the teacher's observation of the way pupils are reading in his class is very important. As a check on the teacher's observation a group test of mental maturity yielding a language and a nonlanguage score is helpful.

ASPECTS OF APPRAISAL

As Bond and Tinker [5, p. 81] have pointed out, retardation in reading may be (1) part of a general immaturity, or (2) due to a deficiency in one or more reading skills, or to lack of most of the basic skills, or (3) complicated by emotional and social problems. Failure to learn to read usually results from a constellation of inhibiting factors [26] which vary from student to student and even within the same individual at different times. A single factor may become functional only as part of a syndrome or combination of factors.

The aim of appraising or diagnosing a person's reading is to help the student, teacher, and counselor understand—

Why the student reads
What he can read
What he does read
How he reads
What his difficulties are
What his reading potentiality or capacity for learning to read is
What is preventing him from attaining it.

Each of these kinds of information is important in guiding instruction. If we know why he reads—what kinds of reading he has to do now and will have to do later in life—we have an understanding of his motivation for reading. We must know how he reads in order to provide suitable material and methods. Without this knowledge a teacher often increases a student's sense of failure by giving him texts or books that are too difficult. Understanding of his reading potentiality helps the teacher to decide whether the student should be encouraged to attain higher levels or be content with his present performance. Finally, an understanding of the difficulties and dynamics in the case is essential to prevent failure as well as to make improvement.

In past years diagnostic information was obtained systematically as the first step. It often took several weeks. However, there are disadvantages to making a thorough diagnosis before beginning treatment. A large dose of diagnostic testing often increases the individual's sense of inadequacy as well as his impatience at not making progress with his reading. To avoid these undesirable reactions, the teacher of reading now obtains diagnostic information continuously along with instruction. As the student learns, the teacher gains understanding of his reading ability, interests, motivation, potentialities, and difficulties. This is true for groups and individual cases. Standardized tests are introduced as the student and teacher feel the need for special objective information.

A comprehensive appraisal procedure involves (1) obtaining from school records, interviews, and other dependable sources personal data about the individual's development, attitudes, interests, and personal relations; (2) securing from tests objective information, checked by observation, on his probable capacity to learn; (3) finding out, through standardized tests, informal tests, and observation of the learner in various situations, how well he reads orally and silently and his strength and weaknesses in different kinds of reading; (4) analyzing, when indicated, specific parts of the reading process such as word recognition, comprehension, vocabulary, etc.; (5) obtaining clues of conditions that are blocking his progress in learning to read; (6) formulating, on the basis of all the data collected and interpreted, hypotheses as to the nature of the reading problem; and (7) following through on the most plausible

hypothesis with recommendations for remediation or continued growth in reading achievement. These, however, are not distinct steps. Diagnosis is more like the work of an oil painter who makes an initial sketch and fills in details, continuously modifying and painting over parts of the picture as he gains new insights. Appraisal is a continuous performance interwoven with instruction and, in some cases, therapy.

DANGERS IN APPRAISAL

Diagnosis is not without its dangers. Even the informal classroom diagnosis, if used to divide students into reading-ability groups, may cause some student to accept his reading group level as a final appraisal of his ability. Much harm may also result from labeling a child "a remedial reading case." The effect of giving a child a derogatory diagnosis has been demonstrated in cases where stuttering is apparently caused by such a diagnosis. Johnson stated that "in case after case stuttering, as a serious speech and personality disorder, developed *after it had been diagnosed*" [17, pp. 5–6].

Another danger stems from inadequate or faulty diagnosis, for example, using only the results of reading tests. A student in the lowest quarter of the class may not be a reading case. In fact, he may be doing his utmost and reading better than might be expected. The child who has the lowest reading score in his class may need only time to grow. Any special stress on reading at this time may retard other aspects of his development and arouse antagonism toward reading, in which he cannot, at the moment, succeed. If his progress is out of line with his true developmental trend, he is likely to fall back into his original growth trend when the special stimulation is discontinued.

Any diagnosis must be tentative, subject to continuous revision as new insights are gained. Practice, instruction, and diagnosis are interwoven. Insights gained through any of the diagnostic methods should be immediately put to work. Too often time spent in diagnosis is wasted because the counseling, practice, and instruction suggested by the diagnosis are not carried out.

METHODS OF APPRAISAL

An understanding of the multiple and complex causation of serious reading difficulty underlies the methods used. Any combination of the following causes is possible: physical disabilities; educational deprivation; insufficient mental ability to meet the expectations of teachers who adhere to grade standards of achievement for all children; home conditions—too little or too much parental stimulation, tense emotional relations that

interfere with learning; and other kinds of emotional disturbance (see Chapters 1 and 13). A thorough study of the causation of reading difficulty has been made by Robinson [24].

All of the general methods described in this section may be adapted to any age group. Tests of vision, medical examination, standardized tests of capacity and reading achievement, informal tests and inventories may all be used at any grade level. Observation, too, is a basic technique applicable to all situations. With younger children diagnosis through oral reading is essential. With older children and adolescents, the interview, written personal documents, and daily written schedules are more appropriate, though the latter may be dictated by younger children.

Observation and Tests of Vision and Hearing. An adequate eye examination is a basic part of diagnostic procedure in reading cases. Although research has not yet shown a clear relation between single visual defects and reading disability, in an individual case any visual difficulty may be an important diagnostic factor (see Chapter 1). Psychological influences on visual functioning are being increasingly recognized by eye specialists. Various diseases may effect the eyes—diseases such as tuberculosis, syphilis, avitaminosis, and many others. Stys, foreign bodies in the eyes, such as cinders and dirt, and mechanical injuries are frequently a cause of trouble. The alert teacher is often the first person to discover a child's eye defects. From the cumulative record and his own personal observation, the teacher, with some training, can recognize eye conditions that should be referred for an examination [19, 31]. To help the teacher in this task, the American Optometric Association, The National Society for the Prevention of Blindness, and other organizations have listed symptoms observable during reading activities that are relatively important in the diagnosis of visual difficulties:

Losing the place while reading
Avoiding close work
Holding the body rigid while looking at distant objects; shutting or covering one eye; thrusting head forward when looking at objects
Holding reading material closer than children normally do
Frowning, excessive blinking, scowling, squinting, or other facial distortions while reading
Excessive head movements while reading

Other indications of eye difficulty are:

Poor sitting posture while reading
Tilting head to one side
Rubbing the eyes frequently
Showing signs of tension or irritability during close work
Showing redness, puffiness, and other unusual appearance of the eyes
Being oversensitive to light

To supplement and check the teacher's observation, a number of visual screening devices are available. The Snellen chart has been used the most widely and the least accurately. Conditions of lighting and distance are often neglected. The chart should be placed exactly 20 feet from the child; it should be illuminated with 10 foot-candles of light; the letters should be shown one at a time through a window in a card rather than all at one time; the easier letters should be shown first to build the child's confidence. Unless special lenses are used, farsighted children, who are the most likely to be poor readers, will not be detected.

The illuminated Snellen chart may be supplemented by tests of farsightedness, muscular imbalance, and depth perception. Sweeting [35] described this procedure, which takes three to five minutes per child, can be administered by the school nurse or teacher after she has had instruction, and costs about $20.

Four other more expensive and adequate instruments for visual screening are the Bausch & Lomb Orthorater (Rochester, New York), the Massachusetts Vision Test (Welch-Allen, Auburn, New York), the Keystone Visual Survey Test (Meadville, Pennsylvania), and the Eames Eye Test (Harcourt, Brace & World, Inc.). The first two agree most closely with optometric examinations [25, 26]. From the standpoint of reading, the Orthorater and the Keystone Visual Survey have the advantage of testing at both far-point and reading distance.

When the screening test and the teacher's observation indicate some eye difficulty, the individual should be referred for a more thorough examination. There are three types of specialists to whom reading cases may be referred:

The *oculist* is a medical doctor who has specialized, in varying degrees, in the study of the eyes.

The *ophthalmologist* is an oculist who has taken a prescribed series of courses in addition to his work in medical school and has passed the examinations of the National Board of Ophthalmology.

The *optometrist* is a specialist in the field of vision adequately trained to diagnose eye difficulty, prescribe glasses, and give visual training when needed. He recognizes pathological conditions and refers them for proper medical treatment.

If glasses have been prescribed on the basis of a thorough visual examination, the glasses are made and properly adjusted by an *optician*. His work is comparable to that of a pharmacist in that he may only fill prescriptions for glasses, not prescribe them.

It is the responsibility of the eye specialist to give the teacher the information needed to create favorable school conditions for the pupil. The teacher needs answers to these questions:

What is the eye condition; exactly what is the difficulty?

Should the pupil return to the eye specialist for further examination or treatment? If so, when?

Should there be any restriction on his physical activity; if so, what?

Have glasses been prescribed? Should they be worn for near work, for distance, or all the time?

Does the pupil require any special lighting? If so, what kind and how much?

Can he do the normal amount of reading and studying without harming his eyes?

Should he have a special seat in the classroom—near or far from the board? Does he need a special desk, books with large print, large sheets of paper, and large black pencils?

Should he be given any special services in a class for the visually handicapped?

Auditory acuity may be an important factor in reading development. Some children fail to progress in reading because of auditory deficiencies. This is especially true of children taught by phonetic methods. Hearing can be most accurately tested by an audiometer or much less precisely by the watch-tick test or whisper test [3]. Durrell and his associates at Boston University have done outstanding work in the study of the relation of auditory discrimination to reading (see Chapter 2). With training in auditory discrimination prior to phonetic instruction, retarded readers in elementary and high school have markedly improved. Wepman [38] has published a carefully constructed test of auditory discrimination.

Medical Examinations. Although a direct relation between reading and poor health and diseases has not been demonstrated, illness may be a predisposing factor. It decreases the pupil's energy and effort to learn to read and, through causing him to be absent from school, may result, especially in the primary grades, in his missing essential instruction in reading. Prolonged illness may also cause emotional disturbance, affecting progress in learning to read [37].

Disturbance of the endocrine glands, such as pituitary or thyroid deficiencies, may underlie difficulties in reading and other kinds of learning [11]. Chemical imbalance [29], illness, low vitality, metabolism, and vitamin deficiency might affect reading as well as motor and speech activities. In cases of nonreaders and of individuals with a marked tendency to reverse letters and read from right to left, the possibility of brain damage and deterioration of mental functioning through disease should be considered. Cerebral injury during pregnancy and delivery might be implicated in reading disorders, as it has been manifested in cerebral palsy, epilepsy, mental deficiency, and behavior disorders [18]. Slight, unrecognized birth injuries may account for a small number of cases of reading difficulty. "They can be diagnosed with certainty only by a neurologist" [37, p. 129]. A history of premature birth, abnormally difficult delivery, oxygen deprivation, head injury, or high fever accompanying childhood illness alerts the reading specialist to the possibility of brain damage.

The tendency to prefer the left eye to the right (left-eyedness) or to be

inconsistent in eye-and-hand preference raises the still unsolved question of the relation between brain dominance and reading difficulty (see Chapter 1). Diagnosis and treatment of all these medical conditions can be made only by experts in the field, who are usually willing to cooperate with the reading specialist.

Developmental History. From the school record some understanding of a student's reading development may be obtained. It is important to know his marks in each subject and whether he had difficulty in reading in the first grade, repeated one or more grades, was absent frequently, changed schools several times, has had remedial work in reading, accumulated a heavy burden of failures and humiliating experiences—or whether he had a superior or good school record. From the parent, the teacher may obtain, with different degrees of accuracy, information about conditions of birth, health history, sibling rivalry, home language, attitude of parents toward education, toward reading, and toward the child. Not a few parents—to bolster their own self-esteem—expect their children to be superior in every respect. It is quite common for parents to be oversensitive to a slight degree of reading retardation.

Parents show a wide range of attitudes. Some parents tell everyone about the child's reading difficulty—often in front of him. Some hide their punitive attitude under the cloak of strenuous effort to have the defect corrected. They take the child to reading clinics and spend hours at home trying to teach him to read. Other parents, recognizing their tendency to reject the retarded child, lean over backward in the effort to do everything for him, even to depriving their other children of advantages they should have. Still others feel responsible for their child's reading retardation and have a deep feeling of guilt.

This sort of information is valuable in understanding the conditions leading to certain kinds of reading development. Often, teachers have little awareness of the thoughts and feelings that lie behind the expressions on students' faces or the life conditions with which they are coping. For example, one sixteen-year-old is constantly confronted by the superior achievement of her smart ten-year-old brother. When she is asked a question, he makes remarks such as, "Why ask the dope?" When her mother yells at her, the girl's only recourse is to walk out of the room and leave her mother yelling. But that does not help because "then she gets mad and I get hit." Unwittingly, teachers often reinforce a child's unfavorable home conditions.

Reading Autobiography. Developmental in emphasis, the reading autobiography may give valuable insight into the student's reading development from his own point of view. He tells of his early experiences with reading, his present attitude toward and interest in reading, his reading difficulty or problem as he sees it, and what he thinks caused it. Indirectly he may give important clues to reading difficulty stemming from his relations

with family, friends, school, and teachers. In these introspective reports he often reveals what reading means to him.

Other Personal Documents. Other kinds of introspective reports may give insight into the student's reading process (see pages 19–20, 227), his interests (Chapter 18), and his emotional difficulty and personal relations [33]. Unsigned compositions may be written on such topics as "How I Improve My Reading," "Why I Want to Read Better," "What Makes Books Easy to Read or Difficult to Read," "How Books Have Influenced Me," "How I Feel When I Read Aloud in Class." Other topics and questions may give understanding of a student's interests and clues as to the causes of his reading difficulties—"What I Do in My Free Time and What I'd Like to Do," "What I Like and Dislike about Television," "The Kind of Person I Think I Am," "The Kind of Person I'd Like to Be," "If I Had Three Wishes," Useful insights may also be obtained by even a few simple questions such as these:

Would you rather be (1) with people of your own age? (2) with people older than you are? (3) with people younger than you are? (4) alone?

Would you rather (1) play active games? (2) watch television or go to a movie? (3) read?

Would you rather read (1) stories? (2) biography—about the lives of people? (3) about how to make and do things? (4) about science, history, and other subjects? (5) about current events?

What kind of stories do you like best?

What is your favorite subject in school?

What do you like to do best after school?

What games do you like to play best?

What are your favorite television or radio programs?

What are your favorite movies?

What do you want to do when you leave school?

From introspective reports, both teacher and student may become more aware of reading methods and of conditions that are favorable to his reading improvement. For example, Alfred, whose test results showed a gain of over five years in reading, was asked, "How do you account for that—how did you do it?" First he mentioned certain things outside of school, such as listening to grownups talk about careers and current events. He thought that watching certain television programs might have had some good influence on him. His father wanted him to be a lawyer and gave him a law book and helped him to read it. Then Alfred mentioned school activities which he felt had helped him make such a big gain in his reading.

There was a film in assembly which showed how to group your words, how to skim over the article, and then get the main ideas from it. In science, we have to make outlines of various chapters under different topics. In social studies, the teacher gave us an assignment to look through the newspapers, cut

out things on a certain topic, and tell the other kids about them. In music, we are supposed to find articles about singers and records and new song hits. I think the thing which helped me most was the reading we did in the homeroom period. We have a variety of books. Sometimes I am noisy but, after a while, I get down to reading. Also, in guidance class, the teacher asks us what we have been reading. And I've been using the library a good bit, too.

As an afterthought, Alfred added—

In a way, my cousins help me, too, because one is in the fourth grade and one is in the third grade, and I help them do their homework. And I read poems to my little sister so she will learn them. They are mostly Mother Goose rhymes.

Personal documents and answers to questionnaires may be obtained, on a voluntary basis, from individuals or from groups, if the interest and cooperation of the students are enlisted, and if they feel that they are participating in the appraisal of their reading.

Daily Schedule. The student may also contribute to the understanding of his reading by keeping a record of his daily activities for a week. For accuracy's sake he is asked to make entries all during the day, not to try to remember what happened at the end of the day. If he is asked to include details about what he reads as well as when he reads, much may be learned about his reading habits and interests.

Observation. A teacher can readily identify students who need help in reading. He first observes that certain students cannot do the necessary reading in their subjects. He may next discover that their dissatisfaction with their reading and often with school is general; they do not want to read and often look away from their books. He may also note that they do better work in subjects that require little reading and often comprehend better what they hear than what they read.

Observation may be more analytical. For example, specific difficulties in word recognition may be noted and emotional interferences with reading inferred from behavior observed. The reading interview, in which instruction and practice are included, lends itself well to this analytical kind of observation. The interviewer may gain clues as to the individual's reading potential, such as his use of words, his quickness to learn, his ability to organize ideas and to see relations among them. His mental alertness and verbal ability are conspicuous in his conversation and discussion. When students take part in a sociodrama they may reveal some of their experiences with reading and how they feel about them.

Teachers need to learn to read the language of behavior, and to infer more accurately the meaning of the observed behavior. Many kinds of observation may be made in the classroom: signs of tension such as biting nails, restlessness, inattention; aggressive behavior and resistance to learning; failure to follow the thought of a discussion or unusual keenness and originality in giving answers and asking questions; approach to a

reading assignment, quality of comprehension and interpretation of the selection, and insight into its meaning. Especially important are marked changes or fluctuations in reading performance and in attitudes toward self and toward reading.

Tests of Mental Ability. Low mental ability per se is seldom a cause of reading difficulty; difficulty is caused by requiring greater and quicker achievement than should be expected of slow learners. Equally important is not expecting enough of able learners. Intelligence tests are an indispensable tool in reading diagnosis (see Chapters 13 and 15), but they should be interpreted with full recognition of the instability of test scores and of their inadequacy in predicting reading achievement. On the high school and college levels, capacity for reading is increasingly difficult to determine because differences in motivation sometimes compensate for deficiencies in home and school background.

Standardized Tests of Reading Achievement and Capacity [6]. Objective data about the individual's reading level and his weaknesses are provided by these tests (see Chapter 15). Diagnostic data will include (1) *word analysis*—knowledge and use of consonant sounds and blends, vowel sounds, digraphs, prefixes, suffixes, and roots; ability to divide words into syllables; (2) *vocabulary*—the extensiveness and depth of word knowledge; (3) *comprehension*—the various kinds described in Chapter 1; (4) *speed*—the number of words per minute in reading different kinds of material for different purposes; (5) *study skills*—locating information, selecting and evaluating information, following directions, adjusting method of reading to purpose and material, note taking, classifying, outlining, summarizing.

To obtain the greatest diagnostic value from tests of word analysis we should make a chart, with students' names down the left-hand side and items listed across the top, and check students' errors opposite their names. In this way, we can at a glance determine what skills are lacking in a whole class, what skills are needed by small groups, and what skills are needed by only one student. Thus our chart becomes the basis for the special needs grouping described in Chapter 9. The same type of chart should be made for the results of vocabulary and comprehension testing and for study-skills results on other tests.

A diagnosis of a student's reading proficiency is made on the basis of all the information obtained about him. Test scores, seen in isolation, may be misleading. Perry [22] has found that students scoring above the 85th percentile on standardized reading tests may yet be unable to cope successfully with long college assignments.

On the other hand, Diederich has found that a good reading test, long and unspeeded, may be a more reliable predictor of writing ability than a single two-hour essay written under examination conditions [8].

Listening Comprehension Tests (see Chapter 1). Comparison of the

student's comprehension of a passage read aloud to him with his comprehension of a comparable passage which he reads silently often shows unrealized reading ability. If he can get ideas from listening, he should be able to get ideas from reading. The Auditory Test of the Diagnostic Reading Tests supplies this kind of information. Betts [1, pp. 452–454] called it the "probable capacity level" when the student's comprehension is 75 per cent or better and when he shows ability to relate experiences to information gained through listening and to use vocabulary and language structure comparable to that in the passage read to him.

Oral-reading Tests. For testing students' oral reading ability standardized oral-reading tests such as the Gray Standardized Oral Reading Paragraphs (Public School Publishing Company) and the Gilmore Oral Reading Test (Harcourt, Brace & World, Inc.) are available. However, the teacher in the lower grades may detect poor readers in a class by having them read one or two sentences aloud. At any grade level the following informal procedure may be used: The teacher has on hand a series of paragraphs or books of known levels of difficulty. For students above sixth-grade reading ability, the four paragraphs in the Reading Diagnostic Record for High School and College Students [34] may be used. The student chooses one that interests him and, if it seems suitable, the teacher asks him to read it aloud, and after reading it, to tell what it is about. In this way, information is gained about the student's reading level, how he handles little words, how he attacks hard words, how well he comprehends the meaning of words, sentences, and paragraphs [9, pp. 11–13]. Betts's procedure [1, chap. 21] for ascertaining different reading levels is useful:

1. Basal reading level—student can read with understanding and shows no symptoms of strain.

2. Independent reading level—student can read with the teacher's help, comprehends 90 per cent or better, and shows no symptoms of tension or word recognition difficulty except that there is a limit to the number of new words he can cope with as the material goes beyond his reading level.

3. Instructional reading level—the student comprehends about 75 per cent or better but needs teacher guidance when too many new words and concepts are introduced.

4. Frustration reading level—he comprehends less than half of the reading material and shows many symptoms of tension, withdrawal, and word recognition difficulty.

Without this kind of information the teacher may increase an individual's sense of failure by giving him books that are too difficult or insult him by suggesting material that is too easy.

Recording of oral reading and conversation about ideas gained from books or articles have both diagnostic and interest value. Playbacks of these recordings offer opportunity for analysis and criticism and give students incentive for improvement.

Reading Inventories. The reading inventory is a way of collecting and summarizing information on aspects of reading important in the study of each subject. Given at the beginning of the school year, it provides both teacher and student with a basis for more effective reading.

The Informal Group Reading Inventory. This group method of appraising students' silent reading can be used in the upper elementary and high school. It includes questions on location of information and other study skills applied to the books students are using. It also tests the comprehension of passages from books they are expected to read. Applications of the passage read to current events or personal problems, and evidence of the reader's feeling responses and the influence of the selection on his point of view, attitudes, or behavior may also be included in this informal group inventory. A summary chart, with the names of students listed along the left-hand side and types of reading difficulties enumerated across the top, enables both teacher and students to see at a glance the skills on which the class and individuals need special help.

The Individual Reading Inventory. The steps in giving an individual inventory are as follows:

1. Decide on a series of graded paragraphs which may be obtained from a basal reader series or can be specially written to be suitable to the age of the students being tested. Mount each of these on a separate card.

2. Ask a few friendly questions about the student's interests and reading habits.

3. Give a word recognition test such as the Wide Range Achievement Test.

4. Let the student begin reading orally the paragraph on the level indicated by the vocabulary test.

5. As he reads, record the errors he is making, noting whether he answers briefly or at length, in his own words or in the words of the book; whether he embellishes what the author said, etc.

6. After the first oral reading, let him read silently, then reread orally; note improvement.

7. Continue with the graded series of paragraphs until he reaches his frustration level.

8. Read aloud a paragraph on the same level of difficulty and ask the same kind of questions on it.

9. Record on a form his independent, instructional, and frustration levels, and check evidences of poor phrasing, comprehension, vocalization, methods of word attack; make notes on other significant indications of reading ability, attitudes, and interests.

The construction and use of the individual informal reading inventory have been described in detail by Betts [1, pp. 438–487]. It is widely used by teachers in some school systems, and the results are recorded on a standard form.

Informal Testing-self-appraisal Teaching Procedures. Informal and standardized tests are treated in detail in Chapter 15 and an example of an informal test is given on pages 331–333. The freely written responses

to the general question: What did the author say? reveal many different reading patterns, covering a range from retention of incoherent and unrelated details to a complete and creative comprehension of the author's pattern of thought. The free response shows what is communicated to the individual student, how he organizes the ideas gained, and whether he reads between the lines and beyond the lines. It may be followed by short-answer or objective-type questions to test his ability to grasp the main ideas and related details, to draw inferences and conclusions, to define words precisely, and to appreciate the humor, character portrayal, or qualities of literary style.

Informal tests add more precision and continuity to the teacher's opportunistic but important observation in the classroom. For example, a procedure developed by Melnik [21] for improving the reading of social studies material in junior high school starts by asking students to state their aims or goals in reading a social studies assignment. Most students of this age are vague about their reasons for reading and about the reading method that would be most appropriate. They are then asked to read a selection from a social studies book that is typical of the material the students will be expected to read in their classes. After reading the passage they answer two types of questions. Questions of the first type demand a creative response; they are what might be called "open-end" questions: What did the author say? The second type consists of a number of multiple-choice questions that are designed to furnish evidence of the student's ability to get the literal meaning, to see relations, draw inferences, make generalizations, and understand the meaning of key words.

As soon as the student has answered the questions, he has data before him for self-appraisal. He marks his own paper. He grades his free response on a 10-point scale, and analyzes the kinds of errors he has made in the multiple-choice questions. (Each choice represents a certain kind of error.) Instruction follows this self-appraisal immediately, while the students are specifically motivated to learn how to get the right answers and to avoid the same errors next time. If there is a next time, the whole procedure is repeated with another similar selection. After the second exercise is completed and analyzed, the students are able to note the progress they have made. A third exercise makes further improvement possible.

This testing-teaching-evaluating procedure bridges the gap between the hurriedly-made teacher test and the standardized test. It relieves the teacher of some of the burden of making instructional material; at the same time it gives him a concrete model for further testing, teaching, and evaluating, based on the text or reference books used by his particular class.

Opportunities for Informal Diagnosis of Reading Difficulties in a Classroom Situation [1]

There are three essentials to effective informal diagnosis: to listen carefully, to use materials which will offer experience from which diagnosis can be made, and to have an adequate system of record-keeping. . . .

In an English class, my observations could be made in many situations—oral reading; discussion of a book or selection which showed students' comprehension; reports and discussion of current events; discussion of written work; and assignments and directions written on the board. These are all on a group basis, and my class has become accustomed to my jotting down notes as these activities go on. In fact, they are interested in looking at my notes and discussing them with me. At times, some of them will pick up an error I have made or a point I have missed.

From written assignments, I can glean much information about the inter-related skills in reading and writing. If I find the majority of the class needs practice in a given skill, it becomes a class lesson. If not, we work in small groups and from this more individualized contact, I find still more opportunity to diagnose causes of various deficiencies.

I find class discussions an excellent source of understanding, because they show whether a student has comprehended his reading assignment and understands the key words in it.

Many examples of informal diagnostic procedure may be noted if the teacher's report includes what he did or said, what response was made by the student, showing strengths as well as weaknesses; and what was its significance for understanding the student's reading.

The Interview. As suggested in Chapter 13, interviews of many kinds may be used for various purposes. From the interview the reading teacher or clinician may obtain information about the individual's attitude toward himself and toward reading; his interests, goals, and purposes; the reading problem as he sees it; and his reasons for wanting to read better. By introducing oral and silent reading in the interview, the interviewer may obtain information on how the student reads and the difficulties he is having. The interview is the basic technique for understanding emotional difficulties in reading. It may have both diagnostic and therapeutic value.

In the first interview the individual should be encouraged to speak freely about his reading—to present himself and his reading problem in his own way. He may make only obvious surface observations, emphasizing his slow reading, poor comprehension, or other difficulties. Later he may reveal underlying fears or hostility toward persons who are pushing and nagging him or showing more concern about his achievement than about him as a person.

In the first interview, if he is strongly motivated, the student may give his reasons for wanting to read better, either voluntarily or in response to

[1] As described by a high school reading teacher, Julia J. Kanarek.

such questions as: What kind of reading do you do now? Outside of school what need do you have for reading? How did you spend your time yesterday? Last weekend? Is this the way you usually spend your time? Why do you want to improve your reading now? But the interviewer is more concerned with feelings than with facts. He picks up clues the interviewee gives and helps him to explore them further. The interview should be client-centered. Excerpts from initial interviews which encouraged the student to think through his reading problem in his own way are given in Chapter 13.

Projective Techniques. Almost any experience may be considered as a situation in which an individual may reveal his unique personality—something of his inner world of feeling and meaning. However, the more familiar the situation, the more likely he is to make merely habitual responses to it. That is why the projective techniques present rather vague, unstructured stimulus situations such as nebulous cloud forms, ink blots, or ambiguous pictures. To these the individual responds in his own unique way, relatively uninfluenced by the dictates of his culture, his family, his school.

Some attempts have been made to use the projective method in classrooms through such devices as the incomplete story, the incomplete sentence, and provocative pictures. Students' responses to these stimulus situations, even if treated as observations rather than as clinical data, may give considerable insight into the causes of reading difficulty. Some items in the preliminary form of a sentence-completion test designed especially for diagnosis of reading difficulties and a sample of a picture-situation test, both developed by Elizabeth K. Graves, follow:

Directions: Complete the following sentences to express how you really feel. There are no right or wrong answers. Put down what first comes into your mind and work as quickly as you can. Complete all the sentences and do them in order.

1. Today I feel _____
2. When I have to read, I _____
3. I get angry when _____
4. To be grown up _____
5. My idea of a good time _____
6. I wish my parents knew _____
7. School is _____
8. I can't understand why _____
9. I feel bad when _____
10. I wish teachers _____
11. I wish my mother _____
12. Going to college _____
13. To me, books _____
14. People think I _____
15. I like to read about _____

16. On weekends, I _____

17. I don't know how _____

18. To me, homework _____

19. I hope I'll never _____

20. I wish people wouldn't _____

21. When I finish high school _____

22. I'm afraid _____

23. Comic books _____

24. When I take my report card home _____

25. I am at my best when _____

26. Most brothers and sisters _____

27. I'd rather read than _____

28. When I read math _____

29. The future looks _____

30. I feel proud when _____

31. I wish my father _____

32. I like to read when _____

33. I would like to be _____

34. For me, studying _____

35. I often worry about _____

36. I wish I could _____

37. Reading science _____

38. I look forward to _____

39. I wish someone would help me _____

40. I'd read more if _____

Picture Series

Directions: This booklet contains a series of pictures of different situations at home and at school. You are to write in the space provided under each picture what the boy Bill is thinking and feeling. Do *NOT* write what Bill would say but tell how he is feeling.

ANOTHER POOR REPORT CARD! OH BILL, AREN'T YOU EVER GOING TO BE A CREDIT TO US?
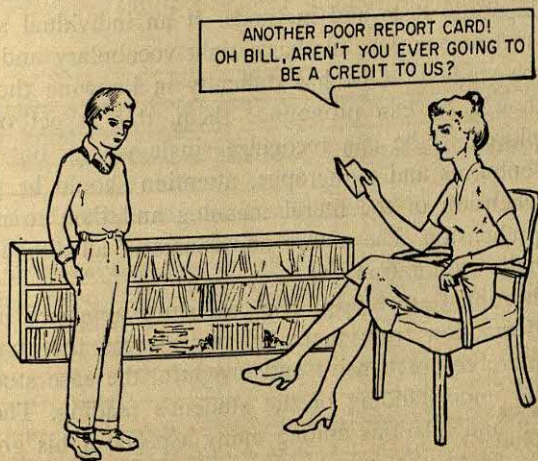
WHAT IS BILL THINKING AND FEELING?

The Rorschach test may throw light on potential mental ability as contrasted with functioning mental ability. The primary use of the Rorschach is to give clues as to personality problems that may be interfering with the functioning of the individual's true mental capacity. The Rorschach categories may also be used as a guide to observation of the individual in life situations.

Among other tests used in the clinical diagnosis of serious reading problems are the Thematic Apperception Test, the Bender Gestalt, and the Machover draw-a-person test.

PATTERNS OF APPRAISAL

Patterns of diagnostic procedure cover a range from the simplest to the most technical, from the general to the most analytical, and from the diagnosis of the class as a whole to the case study of individuals [5].

Continuous Classroom Appraisal. The classroom teacher, assisted by the reading teacher or consultant, through daily observation, the use of informal tests and inventories, and the results of the school testing program, can determine how well each student is reading, the range of reading ability in the class, the amount of retardation, and the individuals who need more analytic diagnosis. Such study will uncover the need for instruction of subgroups and of individuals.

Understanding of the specific difficulties and interferences in effective reading unfolds as the teacher sensitively guides students' learning. By using all the diagnostic information available, the teacher can help the student meet some of his immediate reading problems and can prevent a certain amount of embarrassment and discouragement.

Analytic Diagnosis. More specific information about word recognition and meaning, comprehension, study skills, and interests can be obtained by analytic diagnostic tests and methods. If an individual shows special difficulty in word recognition, his basic sight vocabulary and word attack skills should be studied. If he has difficulty in knowing the meaning of words even though he can pronounce them, this aspect of vocabulary should be explored. If he can recognize single words, but is unable to comprehend sentences and paragraphs, attention should be given first to simple comprehension of the literal meaning and then to more difficult levels of comprehension. The nature and causes of all difficulties detected require systematic exploration.

Synthesis through Case Study. The case-study approach interprets and synthesizes information from many of the sources that have been described. The more comprehensive and insightful the case study, the more adequate is the understanding of the student's reading. The case study shows trends in and relations among many aspects of his growth as well as giving clues as to the possible causation of his difficulties. Such a

unified diagnostic procedure is ideal for understanding and helping the student who is reading below his potentialities.

Student Self-appraisal. Students should early begin to take responsibility for making their own appraisal of their reading. Using as many of the methods of appraisal as are appropriate, students on all educational levels can learn how well they read, the kinds of errors they make and how to correct them, conditions conducive to effective reading, interfering factors, and ways to use reading to meet their needs and further their personal development.

APPRAISAL OF GROWTH

It is important to appraise the student's growth as well as his reading status. This is difficult because progress is always relative to the capacity of the student and to his opportunities for learning. Progress as measured by gains on standardized tests is often exaggerated because the standard error of measurement is not considered. The difference in scores between the initial and final test may be merely a chance difference rather than real evidence of growth.

However, all the methods of appraisal suggested, if used over a period of time, will yield evidence of progress. For example, dated anecdotal records, inventories, and informal tests given periodically, dated samples of a student's reports on reading or oral reading or discussion of books can all be used to show his progress. On the basis of this understanding the student will make his own individual plan for improvement, talk it over with the teacher, and then carry it out. It is the administrator's, teacher's, and librarian's responsibility to schedule time and provide materials of instruction and equipment needed and a teacher of reading to assist the pupils, in groups and individually, in making progress.

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CHAPTER 15

Appraisal of Students'
Reading Ability through Tests

The instruments for the measurement of reading ability are determined by what reading is. A rather baffling characteristic of reading, so far as measurement is concerned, is that it is a continuous and changing process, an inward process, which for the most part is not directly observable. It has no content, or, expressed with better accuracy, its content is that of the moment—kaleidoscopic and ever-changing. In a sense, a reader is like a cross-country runner who encounters much unevenness in terrain as he covers the course. But there is an important difference. The sole purpose of the runner is to cover the course as quickly as possible. Time is the measure of his efficiency. A reasonable degree of speed is important for the reader, too, but it is greatly secondary to understanding. Comprehension is the principal determinant of the degree of his success.

Many different procedures may be used in appraising reading ability. Some of these have been described in the preceding chapter. By observing the individual student, talking with him, and studying his written compositions and examinations, the teacher can obtain considerable information about his reading ability, his interests, and his needs for reading. When he reads orally, the teacher can immediately detect mispronunciations, substitutions, insertions, omissions, additions, repetitions, and reversals of letters, syllables, words, and phrases. He can note the student's fluency and phrasing, his embarrassment in reading before a class, or his apparent self-confidence. By asking him to summarize what he has read or to

answer questions on it, the teacher can obtain valuable information on the pupil's comprehension.

More precise information may be obtained through measurement. The results of tests, both informal and standardized, are almost indispensable in a school's developmental reading program and in the planning of corrective and remedial work on the part of either classroom teachers or special teachers of reading. A variety of approaches to the measurement of reading should be employed, and care should be taken to avoid placing too much confidence on the results of any one test.

PROBLEMS INVOLVED

Reading is one of the most difficult of all abilities to measure accurately. The problems in the measurement of reading are due mainly to the intricate nature of the reading process.

The first problem is created by lack of agreement concerning what reading is. Is it the development of a set of habits and the mastery of mechanics? If so, certain standardized devices, such as the eye-movement camera may be sufficient; but few reading specialists are willing to accept this limited definition of reading. Is reading the ability to get facts from the printed page? If so, reading achievement can be measured by means of paper-and-pencil tests with a high degree of reliability and validity, but this definition is likewise regarded by most persons working in the field of reading as too narrow. Is the most important characteristic of reading the ability to carry on the varied and complex processes which we commonly associate with thinking? Most specialists apparently prefer this view of reading. If this concept of the nature of reading is generally accepted, measurement includes the appraisal of ability to comprehend all types of reading materials, to form judgments, to appreciate literary quality, to apply generalizations, and to perform the varied kinds of mental activity characteristic of the fields of literature, natural science, social science, and the fine and practical arts, and of everyday living.

A second problem is created by the fact that, although it is recognized that there is a variety of kinds of comprehension, apparently thus far no one has formulated a list that is uniformly accepted as a basis of instruction and hence of measurement. Until we are agreed on just what reading comprehension includes, it is useless to try to construct a test which will satisfy all teachers of reading.

A third measurement problem is related to the question of the reliability and the intercorrelation of the part scores or subscores on reading tests. The most effective remedial teaching of reading is based on diagnosis, which in turn depends on the measurement of different aspects of reading ability. The reliable measurement of, let us say, six or seven aspects of reading ability requires more time than most persons are willing to

give to testing. Moreover, the intercorrelations among the part scores on reading tests are often quite high, and it is known that when subtests are highly intercorrelated the scores have little actual diagnostic value. Subtest scores, however, give clues for further study.

A fourth problem has its origin in the nature of word meaning. A test of vocabulary is generally accepted as a standard part of a reading test. A large proportion of our words have several meanings. One cannot say that a pupil really knows the meaning of a certain word simply because he has given the correct response for it in a vocabulary test. One can only say that he knows the meaning which was called for by the test situation. However, this limitation should not be overemphasized. Vocabulary tests are among the most reliable of all tests involving the higher mental processes.

A fifth measurement problem is concerned with tests of rate of reading. The measurement of reading speed is not the simple matter that it may appear to be. The main difficulty is caused by the fact that it is necessary to check on comprehension in some way, since rapid movement of the eyes over the material without understanding is futile and cannot be called reading in the generally accepted meaning of the term. The need to measure reading comprehension, as well as speed, has led to the evolution of at least five kinds of rate tests, but in none of these is the combination of speed of reading continuous material and questions on the material covered entirely satisfactory.

A sixth problem is that of discovering the relationship between scores on reading tests and subsequent success in reading, in school work, and in different vocations. For example, is level of comprehension, as measured by the Cooperative English Test: Reading Comprehension, closely related to the future success of the pupils in the study of science? How readily must a pupil read the rate portion of the Iowa Silent Reading Test in order to do the reading expected of a ninth-grade pupil in the typical public high school? We can raise numerous specific questions for which we will not have the answers until many long-term follow-up studies are made.

A seventh problem related to measurement of reading grows out of the need for careful and verified prescription based on the diagnosis resulting from the use of reading tests. Thus far very few attempts have been made to develop highly valid and reliable diagnostic tests and practical sets of materials designed to be used directly in correcting any difficulties revealed by the diagnosis. The Diagnostic Reading Tests [18] and supplementary materials represent one such attempt in this direction.

Notwithstanding the difficulties in developing valid tests for use in diagnosing reading ability, it is still possible to prescribe a testing and training program in reading that will take account of individual needs. Reading is a *unitary* process. While training that is specifically planned for the needs of a pupil as shown by diagnosis is more effective than are

less specific procedures, there can be no doubt that training aimed at one reading objective is likely to spread over several other objectives. For example, improvement of reading vocabulary will enhance the ability to grasp the central thought of a passage, and the development of greater power of reading comprehension will directly increase reading speed. Thus, if a teacher is able to make even a fairly accurate appraisal of a pupil's strengths and weaknesses in reading on the basis of measurement and other information, he can be reasonably sure that his efforts to correct the indicated weaknesses will not be wasted. This oneness, this unity of the reading process, is at once the despair and the saving grace of the multitude of measurers and remedial workers who have turned their attention to the reading field.

MEASUREMENT PROCEDURES USED

Since silent reading is the way people read at least 95 per cent of the time, teachers of reading devote most of their attention to silent reading except at the beginning stage. Consequently, most of the work on the measurement of reading has been directed toward the measurement of silent-reading ability.

Informal Tests in Each Subject. By assigning a passage from a textbook or a reference book, timing the reading, and testing the comprehension, the teacher will learn much about how well the students read the text or reference books used in his subjects. An example of the questions asked in this kind of test,[1] used with senior high school and college students, follows. Only some of the questions that appeared in this informal test are shown as illustrations.

Reading a Science Article

Directions: Read the following article in the way in which you would naturally read similar scientific material. As soon as you have finished reading, write on the blank "Time" the figure you see on the board. Then turn over the article and write the answers to the questions from memory.

The article is then read by the pupils, while the teacher writes on the board the number of seconds that have elapsed at ten-second intervals.

(Answer Sheet)

Name_____ Grade_____ Age_____
Time_____

PART I

What did the author say?

[1] Abstracted from Ruth Strang, "Reading a Science Article," *Science Education,* vol. 29, pp. 72–77, March, 1945.

PART II

A. It is important to understand the main ideas of what you read. In each exercise below check the best, most complete, most accurate statement of the main idea.

 1. By means of bands of color
  _____(1) drugs may be detected
  _____(2) chemicals may be identified and purified
  _____(3) scientific experiments can be performed
  _____(4) new elements can be created

 2. The principle that underlies this color method is
  _____(1) that substances have an affinity for the adsorbent
  _____(2) that colors of light rays spread out in a spectrum
  _____(3) that molecules of different substances travel down a column of adsorptive material at different rates
  _____(4) that molecules have the same degree of affinity to the adsorbent

B. It is desirable to understand the important details you have read. Below are statements of important details in the passage. If the statement is true, according to the passage, put a plus (+) on the line at the right of that statement. If the statement is false, according to the passage, put a zero (0) on the line at the right of that statement.

 1. The technique described in this article was first developed in 1906. _____
 2. The new discovery immediately caused revolutionary changes in chemistry. _____
 3. Carotene was found to be a single substance. _____

C. It is important to be able to answer questions about what you have read. Write the answers to the following questions using *only* those facts which are discussed in the passage and which help to answer the questions.

 1. What is the name of the technique described in this passage?_____
 2. Who invented this technique?_____

D. It is important to be able to draw conclusions from what you have read. If you think a conclusion below is probably true, considering the facts in the passage, put a circle around PT. If you think a conclusion is false, put a circle around PF. If you think the facts given in the passage are insufficient to allow you to make a decision, put a circle around the (?).

 1. Chemical analysis by color has produced revolutionary changes in chemical methods. PT PF ?
 2. Vitamins would not have been so rapidly isolated in pure form if the method described had not been invented. PT PF ?

E. It is important to know the exact meaning of words in a passage. In the exercises below check the word or phrase which means most nearly the same as the italicized word in the sentence.

 1. By means of bands of color, *adsorbed* by means alumina, magnesia · · ·
  _____process of adhesion of molecules to the surface of solids
  _____assimilated
  _____molecules dissolved in a liquid

_____adopted
2. ... who investigated the *pigments* in plant leaves ...
_____paints and enamels
_____colorless substance
_____coloring matter
_____segments
_____a kind of mould
_____a small particle of dust
_____a unit of matter

PART III

A. Now think back and try to describe the process you used in reading this article.
B. Answer thoughtfully and accurately.
1. Just how did you get the main ideas?
2. Just how did you find and remember details?
3. What do you do when you read that makes it possible for you to answer questions?
4. What do you do when you read that makes it possible for you to draw conclusions?
5. How do you figure out the meanings of unfamiliar words?

Informal tests of this kind supply valuable information about the way each student organizes his ideas as he reads, the adequacy with which he can express them, and the accuracy with which he can comprehend the main points and important details and can draw inferences. If questions on reading method are included in the test, the teacher and the class gain specific suggestions as to effective methods of reading the kind of material tested.

Photographs of Eye Movements. The only aspect of the silent-reading process evident to an observer is eye movement, except in the case of immature reading, where lip movement may also be persent. Consequently, eye movements are the only phase of the whole complicated procedure that can be measured directly. The ingenious technique for photographing eye movements, developed early in the present century and used extensively in research by Dearborn, Judd, Buswell, Gray, Taylor, and others, has contributed much to our understanding of the reading process and to the study of the reading difficulties of individual pupils.

For school situations, however, the photographic technique for measuring and evaluating reading has certain practical difficulties. First, it sets up a rather artificial reading situation in which some individuals may become self-conscious and fail to perform normally. However, a more nearly normal reading situation may be provided by means of fairly recent adaptations of the photographic technique known as the Brandt Eye

Camera [2] and the Reading Eye.[3] Second, it is an individual method and, therefore, hardly suitable for use with all pupils, particularly in large schools. Third, the photographing of eye movements calls for comparatively expensive equipment that is not accessible and is not likely to become available to the great majority of schools. A fourth and still more important limitation is that when used extensively in a school, this technique may tend to focus the attention of teachers upon the mechanics of the process and away from the central feature of all worthwhile reading, which is comprehension.

Theory and Technique of Paper-and-pencil Tests. For practical purposes, in the usual school or college setting the only feasible procedure of measuring silent-reading ability is to employ paper-and-pencil tests containing objective questions which measure comprehension of passages indirectly after the passages have been read and not as an aspect of the continuous reading process itself.

At best, a single reading test can provide evidence concerning an individual's ability to read one kind of material, or a few fairly limited kinds, and under a particular set of conditions. Caution needs to be used lest generalizations be carried further than is warranted by the test data. Reading achievement typically varies with the nature and with the purpose for which the reading is done, and the better the reading ability of the individual, the greater his flexibility and adaptability to different materials and circumstances.

With few exceptions, the more recent reading tests are longer than earlier tests and generally provide anywhere from three or four to eight or ten different scores. Some of these are not so long as they should be in order to measure reliably as many aspects of reading ability as they are designed to measure. Factor-analysis studies aimed at revealing the components of reading ability can help to point the direction that the measurement of reading should take.

Some persons have taken a functional approach to reading-test construction by asking the teachers to indicate what kinds of information they need about individual pupils in order to be prepared to start an intelligent program of teaching them. This was the approach taken by the Committee on Diagnostic Reading Tests in the construction of a series of diagnostic tests briefly described later in this chapter.

Diagnostic Tests versus Survey Tests. The terms *diagnostic tests* and *survey tests* are often used as if these two kinds of tests were clearly differentiated, but there is no clear dividing line between the two. An achievement test which yields only one score is not inherently diagnostic, although even this kind of test might be used in a diagnostic way if a user wished to take the trouble to group the questions testing similar

[2] Distributed by C. H. Stoelting Company, Chicago.
[3] Produced by Educational Developmental Laboratories, Huntington, N.Y.

abilities and to study the answers with care. Whenever a test yields two or more scores which may be compared on the basis of norms, it begins to lend itself to diagnosis. As the number of part scores is increased, the potential diagnostic value of the instrument usually is enhanced provided the scores represent reliable measures of different kinds of ability.

Some tests, however, appear to possess greater diagnostic value than they really have, for their time limits are so short that the part scores are not reliable enough to be used as the basis of an analysis of the reading ability of individual pupils. It is not possible to obtain a detailed and highly reliable diagnostic measurement of reading achievement within the time limit of the usual class period. A few test makers have succeeded in measuring with fair reliability three or four different aspects of reading achievement within a period of forty or forty-five minutes, but at least two or three hours are needed to obtain a highly reliable measurement of many detailed aspects of reading.

Aspects of Reading Ability Measured by Tests with Diagnostic Features. An analysis was made of the aspects of reading ability covered by twenty-eight tests on all educational levels from primary to junior college years, each yielding three or more separate scores. A summary of the kinds of reading ability measured by the twenty-eight tests and the number of tests containing subtests for these kinds of reading ability is shown in Table 2. Although the data in the table are subject to a number of limitations, they do bring out two facts rather clearly. One is that attempts have been made by test authors to measure a wide variety of kinds of reading. Forty-nine types of reading ability are listed in the table, of which twenty-three were mentioned in only one test. It will be observed that the kinds of reading ability listed are by no means independent of one another. The second fact brought out by the table is that there is considerable agreement among test makers concerning the desirability of measuring certain aspects of reading.

Most of the kinds of reading ability that appear near the top of the table seem important as a starting point in the diagnosis of difficulties in reading. Frequency of use in testing, however, is not necessarily a criterion of value. For example, it is reasonable to think that ability to perceive relationships, which appeared in only one of the twenty-eight tests, is at least as important in the interpretation of reading materials as reading speed, which was measured by ten of the tests. It would be of distinct help to test authors if teachers would indicate those aspects of reading achievement which, according to their own experience, are basic to successful reading in the content fields.

Silent-reading Tests. A demanding task in a reading-testing program is to become familiar with the many available reading tests and to choose those best suited to the needs of the local reading program. Not all the tests worthy of consideration can be commented on here, but several kinds

Table 2

Types of Reading Ability Measured by Twenty-eight Reading Tests

Type of reading ability	Tests measuring ability	
	Number	Per cent
Word meaning or vocabulary	19	67.9
Paragraph comprehension or meaning	13	46.4
Sentence meaning (also questions)	11	39.3
Rate of reading	10	35.7
Story comprehension	7	25.0
Noting and retaining details	6	21.4
Reading directions	5	17.9
Use of index	4	14.3
Word and phrase recognition—auditory (primary grades)	3	10.7
Word and phrase recognition—visual (primary grades)	3	10.7
Maps, graphs, and charts	3	10.7
Interpretation or interpreting paragraphs	3	10.7
Technical vocabulary or vocabulary of special fields	3	10.7
Central thought or main idea	2	7.1
Organization	2	7.1
Fact material	2	7.1
Total meaning	2	7.1
Directed reading	2	7.1
Alphabetization	2	7.1
Drawing conclusions or inferences	2	7.1
Prediction of outcome	2	7.1
Use of references	2	7.1
Comprehension efficiency or accuracy of comprehension	2	7.1
Poetry comprehension	1	3.6
Use of dictionary	1	3.6
Relevant and irrelevant statements	1	3.6
True and false deductions	1	3.6
Recognition of form—likenesses and differences	1	3.6
Reading capacity—word meaning	1	3.6
Reading capacity—paragraph comprehension	1	3.6
Word discrimination	1	3.6
Reading comprehension in biology	1	3.6
Reading comprehension in history	1	3.6
Reading comprehension in literature	1	3.6
Reading comprehension in science	1	3.6
Ability to perceive relationships	1	3.6
Range of general information	1	3.6
Integration of dispersed ideas	1	3.6
Comprehension—auditory	1	3.6
Recognition—auditory	1	3.6
Associated word meanings	1	3.6
Selecting and classifying information	1	3.6
Word attack—oral	1	3.6
Word attack—silent	1	3.6
Directory reading	1	3.6
Advertisement reading	1	3.6

of reading tests may be characterized briefly, and some tests illustrative of each kind may be mentioned. An extensive list of reading tests for all levels is given in the references at the end of the chapter.

Kinds of Silent-reading Tests. Reading tests may be classified according to the nature and complexity of the scores they yield. One kind provides only one over-all score. Early in this century when the first objective tests appeared, several reading tests, such as the Thorndike-McCall Reading Scales, were one-score tests, but nearly all of these have long been out of print. So this kind of test became almost extinct until 1957, when the Sequential Tests of Educational Progress, or STEP, were published [75]. At each of the four levels, grades 4 to 6, 7 to 9, 10 to 12, and college, the reading test of this series is a seventy-minute test from which only one score is obtained. The STEP reading test is a carefully and expertly constructed test, but since it yields one score only, it is of limited value in a reading program if used alone.

However, a listening comprehension test [4] is also available in the STEP series. It is believed that a listening test is one of the best measures of reading potential, although there is need for more research on this question. Some useful information having broad diagnostic value may be obtained from the STEP listening test and the STEP reading test when used together.

If the teacher will take the trouble to analyze the responses of each pupil to the various test items, the STEP reading test, even when used alone, may have some diagnostic value. However, this kind of informal analysis requires so much time that busy teachers may not be inclined to undertake it. Those who do are likely to find their interpretation limited by the lack of appropriate norms.

In a second kind of reading test—one which contrasts with the kind just mentioned—an attempt is made to provide, within a class period of testing, diagnostic measurement of a considerable number of aspects of reading ability. This type of test is well illustrated by the Iowa Silent Reading Tests [43, 44] and the SRA Reading Record [79]. This kind of test provides a variety of scores that may be useful to the teacher in analyzing strengths and weaknesses as a starting point in the individualization of instruction, provided the part scores have sufficient reliability to serve this purpose. Usually such tests, in which the time limits for the parts are very brief, either have a large speed component in all the scores, or the number of questions in each part is so small that the scores tend to be low in reliability. Another possible danger in a many-part reading test which is planned for one class period is that it may place a premium upon rapid superficial reading. A further possible weakness in this kind of test is that some of the parts may be concerned with rather narrow aspects of reading ability that are not very fundamental nor broadly applicable in many different reading situations.

A third kind is designed to measure as thoroughly as possible within a

class period three or four fundamental aspects of reading ability which the test author believes to be basic to success in a wide variety of reading situations. It usually measures comprehension and vocabulary, comprehension and rate of reading, or comprehension, rate, and vocabulary. Examples of tests of this type are the Gates Primary Reading Tests, 1958 Revision [28, 30], the Traxler Silent Reading Test for grades 7 to 10 [90], the Nelson-Denny Reading Test, 1959 Revision, for grades 10 to 12 and college [58], and the Cooperative English Test: Reading Comprehension [13, 14]. In general, tests of this type sacrifice extent of coverage in favor of rather thorough measurement of a very few reading qualities regarded as especially important.

The fourth general kind of reading test to be mentioned here is a battery of tests in which a survey section is coordinated with diagnostic sections. This kind is illustrated by the Diagnostic Reading Tests [18], which are the result of a comprehensive and sustained attempt at diagnostic measurement of reading ability on the part of the Committee on Diagnostic Reading Tests, Inc., an independent committee whose initial work was given financial support by the Blue Hill Foundation. (This test battery is described in more detail later in this chapter.)

A few of the reading tests which have some unique features will now be described. Some of these have already been mentioned.

Reading Tests for the Elementary School. The Durrell-Sullivan Reading Capacity and Achievement Tests [25] provide a somewhat different type of diagnostic measurement from that obtained from the other elementary school reading tests. These tests are designed to determine whether or not the reading achievement of a pupil is up to his reading capacity. There are two levels, an intermediate test for grades 3 to 6 and a primary test for grades 2.5 to 4.5. There are two sections at each level—one for reading capacity and one for reading achievement. The reading-capacity test consists of word-meaning and paragraph-meaning parts. This test is administered by means of dictation and picture identification. The pupils do no reading in this test. The main portion of the reading-achievement test also contains a section on word meaning and one on paragraph meaning. In addition, there are a spelling test and a written recall test, which may be given at the option of the teacher. The intermediate capacity test requires about thirty to forty minutes of administration time. The required parts of the intermediate achievement test call for a working time of thirty to thirty-five minutes. The total working time for the primary test is about forty to forty-five minutes. The optional tests at each level may be administered in fifteen or twenty minutes.

The Iowa Every-pupil Tests of Basic Skills [41]—Test A, Silent Reading Comprehension, and Test B, Work Study Skills—are available on two levels: an elementary battery for grades 3, 4, and 5, and an advanced battery for grades 6, 7, and 8. In each battery there are four forms, known as L, M, N, and O. The elementary battery of Test A measures reading comprehension and vocabulary, while the advanced battery provides separate scores for paragraph

comprehension, details, organization, total meaning, and vocabulary. The elementary battery, Test B, contains five parts: Map Reading, Use of References, Use of Index, Use of Dictionary, and Alphabetization. The advanced battery of this test consists of five parts, known as Comprehension of Maps; References; Use of Index; Use of Dictionary; and Reading Graphs, Charts, and Tables. The working time is as follows: for Test A, Elementary Battery, forty-four minutes; Advanced Battery, sixty-seven minutes; for Test B, Elementary Battery, forty-four minutes; Advanced Battery, seventy-eight minutes. Grade norms are available for these tests, and there is a diagnostic profile chart on which the results for an individual pupil may be plotted in terms of T scores or public school percentile ratings. These tests have been carefully constructed, and they are probably comparatively high in reliability as well as validity. There is a newer edition of these tests, the Iowa Tests of Basic Skills, but the reading test and the test of work-study skills are not available separately. Tests covering the five major areas—vocabulary, reading comprehension, language skills, work-study skills, and arithmetic skills—are in one spiral-bound, reusable test booklet. This edition is probably preferable to the older one for schools desiring to test all these skills, but schools planning to test reading comprehension and work-study skills only may use the older edition in which these booklets are separately printed.

Reading Tests for the Junior and Senior High Schools. The following are among the most frequently used and valuable tests in junior and senior high schools.

The Cooperative Reading Comprehension Tests [13, 14] are a part of the Cooperative English Test, but they may be used separately, since they are available in separate booklets, as well as in a single booklet. There are two editions of these tests—an older edition and an edition published in 1960. Forms R, T, Y, and Z of the older edition and Forms A, B, and C of the new edition are available. Each edition is published on two levels. In the older edition, the lower level, C1, is intended for junior and senior high schools, and the upper level, C2, is planned for high school grades and for college students. There are similar grade designations for the newer edition, but there is a reversal in the designation of the levels with the upper level called 1C and the lower level 2C. In both editions, each level contains two parts—vocabulary and reading—and yields scores for vocabulary, speed of comprehension, and level of comprehension, as well as a total score. The total working time for the test is forty minutes, fifteen minutes for vocabulary and twenty-five minutes for reading. There are both public school and independent school percentile norms for the older edition. Public school norms are available for the newer one.

The Iowa Silent Reading Tests, Advanced Test, New Edition [43], consist of nine subtests: Rate, Comprehension, Directed Reading, Poetry Comprehension, Word Meaning, Sentence Meaning, Paragraph Comprehension, Use of Index, and Selection of Key Words. The tests exist in four forms—Am, Bm, Cm, and Dm—which may be scored on the International test-scoring machine. The raw scores of the nine parts are translated into standard scores. The score for the whole test is the median score of the nine scores. The Iowa test is designed for use in grades 9 to 12 and in college. The working time is forty-five minutes.

The Nelson-Denny Reading Test, Revised Edition [58] is designed to measure vocabulary, paragraph reading, and rate. It is suitable for use with pupils in the senior high school, students in college, and adults. There are two forms—A and B—each of which requires thirty minutes of working time. The time allowed for the rate test is one minute, a period too short for satisfactory reliability, according to research on other tests. However, even this brief rate test provides an improvement over the older edition of the Nelson-Denny, in which no attempt was made to measure speed of reading. There is an optional cut-time administration for high-ability individuals, which calls for seven-and-a-half minutes of working time on vocabulary and fifteen minutes on comprehension and rate, or an over-all time of twenty-two-and-a-half minutes. The responses of the students are recorded on a separate answer sheet which is scored by means of the Clapp-Young self-marking carbon-paper device. An unusual feature of the Nelson-Denny test is that the grade norms extend upward through the senior year of college.

The Traxler reading tests [89, 90] consist of the Silent Reading Test for grades 7 to 10 and the High School Reading Test for grades 9 to 12. The Silent Reading Test measures reading rate, story comprehension, word meaning, and paragraph comprehension, and yields a total comprehension score and a total score. There are four forms of this test, the last two of which are adapted for machine scoring. The High School Reading Test measures reading rate, story comprehension, and understanding of main ideas in paragraphs; and it also provides a total score. There are two forms, which may be machine-scored. The working time is forty-five minutes. Public school percentiles for part scores and total scores are available for both tests. There are independent school percentile norms on the Silent Reading Test for grades 6 to 8, inclusive.

Reading Tests for the Entire Range of School Grades. The following reading tests are useful for both elementary schools and high schools.

The California Reading Test, 1957 Edition [8], by Ernest W. Tiegs and Willis W. Clark, is a part of the California achievement tests, but it may be obtained in a separate booklet. It consists of five overlapping batteries which cover the entire range of grades from grade 1 through the junior college. The grade level of each battery is as follows: Lower Primary, grades 1 to 2; Upper Primary, grades 3 to lower 4; Elementary, grades 4 to 6; Junior High School, grades 7 to 9; Advanced, grades 9 to 14. There are two forms of the primary tests, W and X; four forms of the elementary and junior high school tests, W, X, Y, Z; and three forms of the advanced test, W, X, and Y. Each form has two main divisions—reading vocabulary and reading comprehension; each division yields three or four subscores. The working time for the different levels varies from twenty-three to sixty-eight minutes. These reading tests are intended to be power rather than speed tests. The manual for the 1957 edition appropriately warns that "because of the limited number of items (15–45), the section scores should be used only as guides to indicate the presence of student difficulties."

The Diagnostic Reading Tests [18], by the Committee on Diagnostic Reading Tests, Inc., extend from the kindergarten through the freshman year of college. The primary tests cover the kindergarten through grade 4. They consist of a

reading-readiness booklet for the kindergarten and grade 1, Booklet 1 for grade 1, Booklet 2 for grade 2, and Booklet 3 for grades 3 and 4.

The Lower Level of the Diagnostic Reading Tests, Survey Section, consists of two booklets which may be used in grades 4 to 8. Booklet 1 measures comprehension and word attack, and Booklet 2 includes vocabulary and rate of reading.

The Upper Level of the Diagnostic Reading Tests, as mentioned earlier in this chapter, consists of a survey section with certain broad diagnostic features which is designed as a screening test to be used with all pupils in grades 7 through 12 and the college freshman year, and diagnostic sections to be used in analyzing difficulties indicated by the survey section.

These tests are printed in separate booklets as follows: Section I, Vocabulary; Section II, Comprehension: Part 1, Silent, Part 2, Auditory; Section III, Rates of Reading: Part 1, General, Part 2, Social Studies, Part 3, Science; Section IV, Work Attack: Part 1, Oral, Part 2, Silent.

The survey section requires forty minutes of working time. The total working time for the diagnostic sections cannot be stated exactly, since some of these tests have no definite time limits, but it is probable that close to four hours would be required for the administration of the entire diagnostic battery to an individual. However, if the examiner is guided by the results of the survey section, there will be many occasions on which only parts of the diagnostic battery will be used.

There are eight forms of the survey section and two forms of each of the diagnostic sections. The tests may be administered for either machine scoring or hand scoring. Percentile norms are available for each grade level in public junior and senior high schools and for college freshmen. There are also percentile norms for independent secondary schools on the survey section. A considerable amount of statistical information has been made available by the Committee on Diagnostic Reading Tests concerning these tests.

As indicated earlier in this chapter, the STEP reading and listening tests form a series of overlapping batteries covering the grade range from grades 4 through 14.

Reading Tests for Use in College. As already mentioned, several reading tests may be used in college, as well as in high school.

These tests include, among others, the Cooperative English Tests: Reading Comprehension [13, 14]; the Nelson-Denny Reading Test [58]; the Iowa Silent Reading Tests, Advanced Test, New Edition [43]; the Schrammel-Gray High School and College Reading Test [72]; abd also the Diagnostic Reading Tests [18].

Tests of Study Habits and Skills. Tests of silent-reading ability are closely related to tests of study habits and skills. Some test makers have recognized the desirability of supplementing a reading test with a separate test of study skills in the same general battery. It was pointed out earlier in the chapter, for example, that the Iowa Every-pupil Tests of Basic Skills [40], one of the most reliable, valid, and useful achievement-test batteries at the elementary school level, contain a booklet measuring basic

study skills as well as separate booklets for reading comprehension, basic arithmetic skills, and basic language skills. Similarly, one of the parts of the Stanford Achievement Test is designed to measure study skills. For students at the high school and college levels, the Tyler-Kimber Study Skills Test may be used [91].

Other study tests are in the nature of inventories which inquire into the individual's habits of study, such as planning work, taking notes, budgeting time, and so forth. Among these inventories are Wrenn's Study Habits Inventory, Revised Edition [85], Traxler's Survey of Study Habits, Experimental Edition [86], and the Brown-Holtzman Survey of Study Habits and Attitudes [6].

Oral-reading Tests. Ideally, an oral-reading examination is a series of paragraphs graduated in difficulty from material obviously easy for the student to material certainly hard for him, chosen from the subject matter in which his reading difficulty has arisen. Because of the complex nature of reading a student may have difficulty in one kind of subject matter and not in another. Therefore, if it is the history teacher who is concerned about his reading of history, he should be tested in historical material. Only in this way can his scope of historical vocabulary, his equipment in the general vocabulary of the authors concerned, his grasp of historical sequence, his memory for historical facts, and his ability to understand historical relationships and to generalize from historical data be determined. Ideally, too, the oral-reading examination deals not only with the subject matter in which the reader appears to have difficulty, but also with the kinds of comprehension problems that commonly arise in it.

A homemade test of this kind is likely to be crude; mistakes in gradation of materials are made; teachers may overestimate abilities and have a test actually too hard for the retarded readers in whom they are interested. Nevertheless, such a test may be closer to the true difficulties and capacities of the students in the subject concerned than any general, commercial test would be.

For the convenience of teachers who find it impossible to give time and study for the construction of their own tests, there are several oral-reading tests on the market. Among such tests are the Gray Standardized Oral Reading Check Tests [35], which come in four levels of difficulty representative of the reading material in the elementary school, and in five different forms. The method for scoring is very comprehensive in its consideration of the reading problem and is easily adapted.

The Gray Standardized Oral Reading Paragraphs Test [36], is a series of ten passages of increasing difficulty. The easiest passages are of elementary school difficulty, while the hardest are a fair challenge to the retarded reader in college. The scoring is the same as for the Gray Standard-

ized Oral Reading Check Tests. The oral reading paragraphs come in only one form.

A more modern test for the same general purposes and grade levels is the Gilmore Oral Reading Test, published in 1952 [34]. This oral-reading test yields scores for rate and accuracy and also includes a comprehension score derived from questions based on the oral-reading material. Like the Gray test, it provides for an analysis of kinds of mistakes in oral reading. It exists in two forms which appear to be closely comparable.

Attention was called earlier in the chapter to the oral-reading portion of the word-attack section of the Diagnostic Reading Tests for grades 7 to 13. This is one of the very few oral-reading tests planned for high school and college use. The methods of administering and scoring are described in the test manuals and should be carefully studied. The following code is somewhat similar to the one employed in the Gray test:

Errors	*Marking*
1. Failure to recognize a whole word	Underline the word
2. Failure to recognize part of a word	Underline the part mispronounced
3. Omissions	Encircle the word or part of the word omitted
4. Insertions	Write in the word or phrase inserted
5. Substitutions	Write the word above the one for which it was substituted
6. Repetitions	Make a wavy line under the part repeated

An application of this plan of indicating errors is given in the following paragraph:

VANCOUVER

Vancouver is Canada's western port al. It lies in a sheltered bay at the foot of the high evergreen mountains. It is a modern, progressive city, named in honor of the young naval officer who was the first European to visit the landlocked harbor where merchant ships from all parts of the world never now discharge their cargoes.

After each paragraph is read, the examiner may ask the student to lay the test aside and tell in his own words what he has read. The examiner makes notes as to whether the student grasped the main idea, remembered

important details and related them to the main idea, sensed the sequence and seemed to appreciate the implications of the paragraph. Following the reading and the recall, the examiner sometimes finds it fruitful to ask certain questions about the points of difficulty. Some students make no attempt upon a word which, if put to it, they really can comprehend. Some make substitutions for words which, on second look, they can recognize. It is worthwhile to know whether the student is really incapable of the kind of analysis that the word requires, whether he is dependent upon leading questions for its solution, whether an omitted word is really well established in his sight vocabulary but has been omitted by reason of carelessness. The leads which the examiner derives from this kind of analysis are invaluable for the subsequent tutoring, since they suggest areas of further investigation as well as remedial procedures.

The oral-reading test serves also as a situation in which general information can be gained about a student's pursuits and interests: activities that he prefers in his leisure time; motion pictures, radio and television programs that he likes; his occupation goal (motive for reading can be inserted here in relation to his chosen field); the parts of the newspaper that he always reads; magazines that he likes and what he likes about them; favorite subjects of study, hobbies, methods of study, and hours for study; his method of remembering something (clue to his preference for a particular avenue of learning—visual, auditory, or motor); the leisure activities of his family and friends (this to determine the incentive to read generated by his environment); his analysis of his reading difficulties, what he thinks may have caused them, and in what kinds of materials they seem to occur most frequently. These pieces of information, casual and subjective, are yet valuable and may be fitted into the general picture of the case as the examiner has derived it from many sources. Participation in the diagnosis, particularly with regard to his self-analysis, will also make the reader feel more like a consultant, less like a misfit.

A similar procedure has been developed with a series of more difficult paragraphs for use with high school and college students [65]. The first and second paragraphs are of about fifth- or sixth-grade level of difficulty, the third paragraph is of about twelfth-grade difficulty, and the fourth paragraph is from John Dewey's *Human Nature and Conduct.* This range of difficulty and content enables the examiner to see how the student attacks unfamiliar words and how his mind works when confronted with both simple and complex reading.

In addition to the analysis of errors already described and in addition to acute observation of the subject's attitude toward reading, his oral vocabulary, conversational ability, etc., these oral tests afford the examiner a chance to learn much about the subject's thought process in reading. When, after reading the first paragraph, the subjects are asked, "What

did the author say?" their answers may reveal reading processes ranging from most inadequate to most adequate.

Selection, Administration, and Scoring of Tests. *Criteria for Selection of a Silent-reading Test.* An entirely satisfactory silent-reading test has yet to be constructed, and it is quite possible that when such a test does appear, no one will buy it except for use in clinical situations. A truly adequate test would have to be too long, with too many parts to score and too many kinds of material, for any school to find time to use it on a school-wide basis. From among the tests now available the choice of test for a particular group depends upon the school's objectives in reading; the time, money, and personnel available for testing; and the use to be made of the test results. The following are questions suggestive of the criteria that a prospective buyer should consider in selecting a silent-reading test:

1. Does it deal with the vocabulary and the subject matter in which you are interested? If you are a science teacher, you want a test containing science material as well as general reading material. You want the vocabulary to compare favorably with that which you expect the students to acquire in your course or to bring to your course.

2. Does it cover amply the levels of difficulty that interest you? You want a test that is easy enough so that the poorest reader will have some success and hard enough so that the best reader will not make a perfect score. If the poor reader can get no item right, you have no idea how poor he is. If the good reader is 100 per cent right, you have no idea how good he is.

3. Are the reading tasks typical of your demands in the classroom? A social studies teacher said, "I should like to use such and such a test in my class, but it asks all questions of detail, while, in my teaching, details are secondary to questions of relationship and inference."

4. Are the reading tasks eminently suited to the materials presented? A good way to find this out is to see whether a specialist in the field (science, social studies, etc.) feels that the questions asked are the questions that he would be likely to ask on such a passage.

5. Do the tests actually test what they claim to test? Sometimes the vocabulary test is really an analogy test, which puts a premium on intelligence, instead of a test involving simpler synonyms, which would probably reflect better the true status of the students' knowledge of the words. Sometimes the comprehension test is so full of hard words that it tests vocabulary more than it does understanding of the relationships of the words and the thought pattern created by them. Sometimes the speed test is a test of speed of reading and answering questions, as well as a test of speed of reading; and sometimes a speed test has no check on comprehension to show whether the student has understood as he read at that speed.

6. Is the print comparable to that of the book? Some tests are printed on such poor paper in such small type that they are an ocular as well as a reading hurdle.

7. Are the directions clear? Imagine that you are your dullest student and see what you would do with the directions.

8. Are many adjustments required in answering the questions, so that intelligence and emotional stress become prominent in the test score? Certain vocabulary tests require many subtle mental adjustments. As definition for *hasten* there may be *hurry;* these are synonyms. For *flora* there may be *roses;* these are a general term and a specific. For *emu* there may be *animal;* these are a specific term and a general. For *bowl* there may be *dish;* these are two specifics for the general term *pottery.* Experience for yourself the mental discomfort of the twists of thought required in finding the right answers. See also whether the multiple-choice answers are easier words than the word that is being tested, as they should be.

9. Are the examples typical, misleading, or a dead giveaway?

10. Are some of the multiple-choice answers debatable?

11. Do the incorrect multiple-choice responses represent plausible errors? If the wrong responses are not plausible, the student who does not know the correct response is likely to get the item right by a process of elimination.

12. Are the factors that you are most interested in well isolated, so that you may easily determine a student's mastery of them? Ideally, there should be separate parts for the kinds of reading ability that you want to know about. Sometimes by analysis of the test you can pick out the items that deal with the skill you are interested in; but, of course, this is more work.

13. Are enough time and space given to each skill to make the parts reliable? The more parts you have in a forty-minute test, or a test of any given length, the more you sacrifice in reliability, the less sure you can be that each part of the test gives a good picture of the student's achievement in the aspect of reading covered by that part.

14. May the test be used to some extent for diagnostic purposes? As long as you are buying a test, you may as well get one that can be used either for survey purposes or for diagnosis in broad areas, although, as just indicated, reliable, detailed diagnosis is hardly possible in a survey test designed for classroom use.

15. Is the scoring simple without confounding the purpose of the test? A test that yields a single score can do little to show the nature of the student's retardation.

16. Are the norms, according to the manual of directions, based upon a population of a size and character comparable with your class? Are they based upon rural or city, private or public schools?

17. Do specific directions as to the manner in which a passage is to be read precede the test paragraphs? Unless the student knows what is expected of his reading, he cannot apply an efficient technique. Neither can he demonstrate his ability to read for different purposes. The directions and the example should make clear to him the kind of comprehension expected, just as in life or in the classroom a purpose is set for the kind of reading to be done.

Administration and Scoring of Tests. After the test is chosen, plans for its correct administration should be made. If the results are to be compared with the norms, the test must be administered strictly according

to directions. More specifically, attention should be given to the following details:

1. The students should be seated in such a way as to ensure comfort and avoid the stimulus to copy; lighting should be as good as possible; and unnecessary distractions should be avoided.

2. The test should be introduced in such a manner as to arouse interest but not anxiety.

3. All questions should be asked and answered before it begins, not while the test is in progress.

4. Timing should be accurate. The signals indicating when to begin and when to stop should be emphatic.

5. The examiner should watch the class to see that they turn pages at the proper time and follow directions accurately.

6. Observations may be made of individual students' methods of work. For example, the following observation was made of a college student taking the Nelson-Denny Reading Test:

On the vocabulary test he worked in a very tense fashion—feet pushed way back under chair, shoulders hunched. When the time was up, he said he had done very poorly. He changed seven out of thirty-seven responses. He asked whether anyone ever finished the test and I told him rarely, that the test was made so most people didn't finish. He worked with less tension on the paragraph-reading test.

Needless to say, the scoring should be done according to directions and checked to ensure accuracy. It is preferable to use clerical workers who have been trained to do the scoring rather than to expect teachers and counselors to assume this routine and time-consuming duty. If the school does not have available clerical workers, the services of outside testing agencies may often be used to advantage. In interpreting scores, it must be remembered that norms of reading tests are based on reading as it is now taught, not as it might ideally be taught.

Interpretation of Test Results. When a test is administered and scored, only to be shelved in the cumulative record files, it is an extravagant use of school funds. If the time and money involved are to be justified, certain simple observations should be made on silent-reading test results. The following observations of the student's responses on the test are helpful:

1. *The Speed Score. a.* Notice whether the comprehension of the material on which a speed score was given was perfect, nearly perfect, mediocre, or poor. Compare the pupil's speed-score percentile with his comprehension percentile.

b. Note whether the student is apparently a *rapid-careful* reader, one who reads rapidly and understands completely; a *rapid-careless* reader, one who reads rapidly but does not remember much about what he reads; a *slow-careful* reader, one whose speed is poor but whose comprehension is so good that he

may as well read more rapidly; or a *slow-inaccurate* reader, one who reads slowly and does not know much about what he reads.

c. Relate this evidence to what you know of the student's experience, background, and intelligence and of the natural tempo of other members of his family; to the student's explanation for his errors; and to his opinion of his own reading.

2. *The Vocabulary Score. a.* Notice the student's relative position on the norms. Is he where he should be for his grade, intelligence, background?

b. Notice the types of words missed. Do they suggest lacks in certain fields or difficulty with abstract versus concrete ideas? Do they suggest ignorance of the meanings of certain roots, prefixes, and suffixes important to further vocabulary growth?

c. Notice the level of difficulty of the words missed. If the words are arranged in the test in order of difficulty or rarity, it is easy to see whether the student's errors are in the higher, rarer, harder regions, or whether he has a uniformly bankrupt vocabulary. This indicates a difference in the kinds of words to be used in giving him special help.

d. Relate this evidence to the student's reasons for errors (sometimes the error was not due to ignorance of the word meaning), and to his explanation of his method of building his vocabulary, if there is any; to his classroom experiences and his outside reading experiences.

3. *The Comprehension Score. a.* Notice the student's relative position on the norms. Is he where he should be for his grade, intelligence, background? What does this position mean in terms of competition in his class, length of assignments, time required for preparation, reading material to be provided?

b. Notice the proportion of items of a given kind that are missed. In which areas has he missed more questions: in grasping details, making inferences, drawing conclusions, following directions, outlining, getting sequences? What are the kinds of comprehension in which he apparently needs the most help?

c. Notice the number of items covered. If there is no other speed score, this observation can yield an evaluation of the student's speed. The items wrong at this speed, especially if they are scattered through a test that grows progressively hard, suggest the accuracy of the student at the speed he used.

d. Notice the difficulty of the items missed. Does this suggest something about the student's maturity of comprehension?

e. Notice the subject matter of the items missed. Does the student show greater facility with science, social studies, fiction, or some other kind of material?

f. In order to discover the student's power as divorced from speed, have him finish items that he did not complete in the first testing. This will suggest what his possibilities are if he can increase his speed or if he is given ample time for assignments.

Private preparatory schools will usually find the norms for independent schools [4] much more useful than public school norms, owing to the fact that, at the secondary school level, the average independent school stu-

[4] Independent school norms for a number of reading tests are available at the Educational Records Bureau, New York.

dent is at least two grades ahead of the average public school pupil in reading achievement. Consequently, a student in a private school whose reading score falls as low as the public school norm is retarded in terms of independent school standards and may require corrective measures.

Use of Tests in Grouping for More Effective Instruction. Students may be grouped in various ways for more effective instruction. In schools having small classes, teachers skilled in reading methods, and adequate reading material, attention may be given within the regular classes to the reading needs of individuals and groups. The teacher's judgment as to grouping within the class may be aided by his study of the scores on the parts of the test as well as the total scores. Thus, he will make sure that students who are extremely low in some important aspect of reading, such as paragraph comprehension, are scheduled for special help, even though they may be up to average on the test as a whole. Thus, in schools whose equipment is favorable for instruction in reading and whose students' reading difficulties respond to classroom methods of improving reading, no grouping other than that within the class itself is necessary. In schools where the students' reading deficiency is so great that they cannot profit by the kind of class instruction offered, special classes are necessary. The teacher and the specialist in guidance must constantly guard against stigmatizing children who need help. Referral to a reading class or for clinical study can be handled as a privilege, and the individual can be made to feel more important because of the extra attention he is getting. His attitude may then be, "I'm worth spending extra time on. I'm not a hopelessly poor reader."

Although scores on tests are an important criterion for determining grouping of students for special instruction, they are far from being the sole index of reading ability. They should be supplemented by informal tests, records of books and articles he has read in his directed and free reading, and samples of his responses to long passages. The student's attitude toward grouping and his own evaluation of his progress in reading should also be taken into consideration in grouping. His day-by-day progress gives the best indication of proper placement.

Use of Tests in Appraising Individual Reading Ability.[5] When using the part scores on silent-reading tests for the analysis of the reading achievement of individual pupils with respect to certain broad categories, the teacher will find it helpful to employ whatever tables are provided by the authors of the various tests for use in changing the raw scores to standard scores or percentile ratings or some other type of derived score, so that the scores on the parts can be compared directly. The manuals of directions for some reading tests contain tables of percentile equivalents for all scores, from the lowest to the highest. Some teachers insist that they do not understand percentile ranks, but the interpretation of

[5] See also pp. 319–321.

percentiles is really very simple. An illustration will perhaps be helpful in explaining the use of percentiles in analyzing the scores made by pupils on the parts of a reading test. The following percentile ratings correspond to the rate scores, word-meaning scores, total-comprehension scores, and total scores made by six tenth-grade pupils on the Traxler Silent Reading Test for grades 7 to 10:

Pupil	Rate	Word meaning	Total comprehension	Total
Davis, Mary	50	3	3	8
Hill, William	92	10	6	30
Jones, Earle	17	77	77	58
Long, Alice	59	55	52	54
Martin, Phyllis	95	99	97	98
Sullivan, Joseph	5	1	3	2

A percentile rank shows the proportion of the pupils in a group whose scores are equaled or exceeded by the score of a given pupil. For example, the percentile for Mary Davis's total reading score is 8, which means that this pupil is up to or above only 8 per cent of the tenth-grade pupils whose scores were used in setting up the norms. On rate of reading Mary has a percentile rating of 50, which is exactly at the median or average for the tenth grade, but in word meaning and total comprehension she is in the lowest 3 per cent of the tenth-grade group. It appears that she does not need to increase her rate of reading, but that she needs to improve in vocabulary and power of comprehension.

William Hill's percentile ratings provide an even more marked contrast between rate of reading, on the one hand, and word meaning and total comprehension, on the other hand. This boy is in the highest 10 per cent of the tenth-grade pupils in reading rate, but in the lowest 10 per cent in vocabulary and comprehension. Probably he needs to learn to read study-type material more slowly, as well as to develop in knowledge of words and in ability to understand reading materials.

The reading-test percentiles of Earle Jones form a contrast to those of the first two pupils. He is a very slow reader, but he understands the meanings of words and comprehends reading material better than do three-fourths of the pupils in the tenth grade. Because of his relatively high word-meaning and comprehension scores, probably it is safe to put considerable pressure on this boy to get him gradually to increase his reading speed through practice. Whether to do this would, of course, be decided only by taking into account other information about Earle.

Alice Long is consistently close to average for her grade. Her scores give no indication of either marked strength or unusual weakness in reading.

Phyllis Martin seems to be outstanding in all phases of reading meas-

ured by this test. In total reading score she has a percentile rating of 98, which means that in general reading skill she is in the highest 3 per cent of the tenth-grade pupils, as measured by this test. She should probably have great freedom in planning her own reading activities, but frequent checks on the status of her skills are necessary if she is not to develop bad habits through lack of supervision.

Joseph Sullivan, on the other hand, is much retarded in rate, word meaning, and comprehension. His total score is in the lowest 2 per cent of the scores of the tenth-grade pupils. He may require individual remedial teaching. Further diagnosis is necessary.

It is obvious that an analysis of this kind does not carry the diagnosis very far, but it is a useful beginning and one that can be made rather quickly.

In the interpretation of all such test results one should, of course, keep in mind the fact that there is nothing final in the scores on a single test of this kind. While considerable confidence may be placed in the results, as far as groups are concerned, the scores of an individual pupil may fail to indicate his true reading ability because of lack of reliability in the test itself, unfavorable conditions of administration of the test, lack of correspondence between the material in the test and the material in the courses the pupil is studying, and other factors.

From a study of the results of the tests, students should understand better, as measured by the test, not only their general level of reading ability, but also some of their specific strengths and weaknesses. For the majority of students this knowledge supplies real motivation and paves the way to independence in planning their own reading programs. For example, the Nelson-Denny test may furnish high school juniors and seniors and college students with valuable information, individually or in groups, about their vocabulary and methods of paragraph reading. The following information about a tenth-grade student's knowledge of vocabulary was brought out in a discussion of his performance on the vocabulary section:

When we went over the words, we found that he had associated "idolatry" with "idols," and knew what "felon" meant, although he had marked the wrong response on the paper. He said "decrepit" means "firm." When I asked him why he marked "firm," he said, "I couldn't pronounce the word, so I guessed." "Conflagration" was confused with "congregation." He knew what "penitent" meant and thought he had marked it right, but he had confused it with the idea of "mourner" rather than "sinner." He knew "omnipotent" from the line in the hymn that includes "omnipotent hand." In fact, he seemed to know more about the Bible and hymns and church than most young people. "Allayed," he thought, meant "allied."

The Iowa Silent Reading Test shows a student's rate of comprehension; comprehension of poetry; comprehension of words, sentences, and paragraphs; and ability to locate information. Unfortunately there is little or

no variety in difficulty of material within each section of this test, so that for any one section the examiner cannot determine by the score how poor or how skillful the reader is in terms of easier and harder material. The following is typical of the kind of information that may be obtained from a reading test with subtests, such as the Iowa:

B_____ is in the tenth grade and his reading ability tends to be above the average. His comprehension score of 168 is at the 54th percentile. All his other scores are considerably above the median for his grade, with the exception of those for poetry comprehension and use of the index. His standard score in poetry comprehension, 152, corresponds to a tenth-grade percentile of 25. In the use of the index he has a standard score of 143, which is equivalent to a percentile of 12. The results of the test indicate that, although the pupil's reading achievement is in general satisfactory for his grade level, special attention could appropriately be directed toward increasing his comprehension of poetry and improving his facility in using the index of a book. In the interpretation of the scores, however, one should remember that the parts of the test are rather short and therefore not highly reliable and that it is desirable to check low scores by observation and further testing of the pupil.

In these ways—through observation and class contacts, informal tests, and standardized group reading tests—it is possible to appraise students' reading ability in groups with a minimum of interference with regular school organization and schedule of classes.

Finally, it should be emphasized that materials for evaluation of reading ability are by no means all the materials needed in the diagnosis of reading difficulties. It is always necessary to use tests of mental ability in conjunction with reading tests and, as has often been pointed out, it is highly desirable to choose mental-ability tests that are relatively free from the influence of reading achievement. Tests in other areas, such as spelling tests and tests of achievement in content fields where reading ability is applied, are also valuable sources of information for diagnostic purposes. In addition, it may be desirable in the study of individual cases to make occasional and cautious use of interest inventories and measures of personal qualities.

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71. *Schonell Reading Tests,* by Fred J. Schonell, one form, for Ages 5–15, 6–9, 7–11, 9–13, Oliver & Boyd, Ltd., Edinburgh, Scotland, 1942–1955.

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vocabulary, and speed; two forms—A and B—except for vocabulary, which has three forms, A, B, and C, Department of Education, Arts, and Science, Pretoria, Union of South Africa, 1947–1954.

77. *SRA Achievement Series: Reading,* by Louis P. Thorpe, D. Welty LeFever, and Robert A. Naslund, for Grades 2–4, 4–6, 6–9, Forms A and B, two scores—comprehension and vocabulary, Science Research Associates, Inc., Chicago, 1954–1957.

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81. *The Standard Reading Tests,* by J. C. Daniels and Hunter Diack, twelve tests, one form for individual administration, for Ages 9–0 and below, Chatto & Windus, Ltd., London, England, 1958.

82. *Stanford Diagnostic Phonic Survey: Research Edition,* by Grace M. Brown and Alice B. Cottrell, high school and college, one form for oral administration, Consulting Psychologists Press, Inc., Palo Alto, Calif., 1956–1958.

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86. *Survey of Study Habits, Experimental Edition,* by Arthur E. Traxler, one form, for Grades 8–14, Educational Records Bureau, New York, 1944.

87. *A Test of Study Skills,* by J. W. Edgar and H. T. Manuel, Grades 4–9, Forms A and B, The Steck Company, Austin, Tex., 1940–1941.

88. *Tinker Speed of Reading Test,* by Miles A. Tinker, for Grades 7–16 and Adults, Forms 1 and 2, University of Minnesota Press, Minneapolis, Minn., 1947–1955.

89. *Traxler High School Reading Test,* by Arthur E. Traxler, for Grades 10–12, Forms A and B, Public School Publishing Company Test Division of The Bobbs-Merrill Company, Inc., Indianapolis, 1938–1942.

90. *Traxler Silent Reading Test,* by Arthur E. Traxler, for Grades 7–10, Forms 1, 2, 3, and 4, Educational Division of The Bobbs-Merrill Company, Inc., Indianapolis, 1934–1942.

91. *Tyler-Kimber Study Skills Test,* by Henry T. Tyler and George C. Kimber, one form, for Grades 9–16, Consulting Psychologists Press, Inc., Palo Alto, Calif., 1937. (Formerly published by Stanford University Press.)

92. *Watson-Glaser Critical Thinking Appraisal,* by Goodwin Watson and Edward M. Glaser, for Grades 9–16 and Adults, Forms Am and Bm, Harcourt, Brace & World, Inc., New York, 1942–1956.

93. *Webster Reading Readiness Test,* by Clarence R. Stone and Mary Nila, one form, for Kindergarten-Grade 1.5, Webster Publishing Company, St. Louis, Mo., 1950.

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Techniques in Word Recognition, Vocabulary, and Literal Comprehension

"How can we determine the nature of specific difficulties? What can we do to correct them?"

The present chapter assumes that the teacher or examiner has observed the student's oral reading and has made notations regarding his errors. Now we are ready to study the nature of these errors and to plan remedial measures. The suggestions given should be used only as prescribed by the diagnosis. Any technique used to an extreme is harmful. In many cases resistance to reading has been created by drills applied by too persistent parents or teachers.

WORD RECOGNITION

Although these errors of word recognition occur most frequently in the primary grades, they are common among retarded readers in the upper elementary grades and in high school.

Reversals and Inversions. A common error in word or phrase recognition in the beginning stages of reading is the reversal of letters or words or of the members of a phrase. A word like *calm* will become *clam,* the *l* and *a* being interchanged; the word *saw* will become *was,* the entire word being reversed, or *the little red hen* will become *the red little hen.* Sometimes a reversal such as the above will be complicated by inversion: *p* and *d, u* and *n, m* and *w,* and the like will be confused. An adult will make

such errors occasionally, but the persistence of these patterns above the primary grades requires attention.

Various causes have been attributed to these tendencies. Regardless of the theory, all clinical procedures for remediation seem to follow the same general pattern; all advocate a method of teaching reading that forces the issue of direction upon the child, makes him conform to the left-to-right movement. Fernald's procedure in the case of the little boy who was a mirror writer—simply having him start writing so far over to the left-hand side of his paper that he couldn't possibly write in the wrong direction and stay on the sheet—was refreshing in its common sense and simplicity. The kinesthetic approach [1] is prominent as a means of correcting reversals. Have the student trace the form of the word printed or written on a large card, saying the the word in syllables as he traces; then have him remove the card from sight and write the word from memory. Give exercise in the use of a dictionary, which involves awareness of the letter-by-letter sequence. Give experience in the use of the typewriter. Have the student make his own dictionary of newly learned words. Give completion sentences or rhymes in which the proper word must be inserted: "He fed the cows in the _____ (bran, barn)." Have the student write sentences using the words that are confused; make a point of using the words in other written work.

Whatever the error involved in a reading-disability case, it is important that the tutor direct his energies not to a vague area, but to the points of difficulty. Noting the error *was* for *saw*, he should not say, "Oh, reversals!" and then put the student through the gamut of all the reversals that he made in a lifetime. A tutor should never assume that one symptom implies an ailment. Neither should he take it for granted that perfect results on an isolated word or phrase drill can be considered certain proof of a cure. Drill should always have the constant company of natural reading situations.

Substitutions. Substitution of one word for another in a sentence may range from something resembling the correct word in form or meaning to something else that apparently has no relation whatever to that word. Sometimes in an oral-reading test a student, as though in horror of hesitation, will say something, anything, for the word that he does not readily recognize. Again, a person trying to solve a word by the spelling method will spell it out carefully under his breath, furrow his brow, and then pounce upon some word—any word—that to his puzzled brain seems a likely space filler. The word need have no resemblance in form to the correct one. In another case a reader intent upon the content of what he is reading may substitute some other word for the proper one; in his certainty of the direction the thought is taking, he apparently becomes careless of the form of the word and calls it what he is sure that it must be. So *kittens* may replace *cats*, *mittens* may be read for *gloves*, etc. A student

who has read widely with little supervision is likely to make this kind of substitution.

Then there are substitutions that may or may not bear a meaningful relation to the context but that do resemble the correct word in some element of form. *Bath* may become *baby* or *bear* in the case of a reader who attends to the beginning of the word and ignores the ending completely. It may become *ball* to one who notes not only the beginning, but also the general contour of the word. Ignoring the beginning of the word, a student may read *where* for *there*. The same kind of error, except that it seems to make a concession to contour, is the confusion of *flown* with *thrown*. Substitution of *man* for *men, call* for *cell, salad* for *solid* are evidences of failure to observe the crucial mid-portions of words. These substitutions show a preoccupation with the form of the word rather than with the meaning of words in context.

Sometimes word substitutions can be traced to a lack of appreciation of the phonetic possibilities in a letter or a combination of letters, or to ignorance of rules regarding vowels. Many students will call *plumes plums,* evidencing confusion concerning the formation of the plural of *plum* and disregard of the silent *e,* which causes the *u* to assume the long sound. A student who calls *pail pile* is revealing his ignorance of the sound produced by the combination *ai.*

Mispronunciation may result when the student tries a type of word analysis that does not apply, or when he misapplies it. The dictionary is a much safer haven than the rules of phonetics when it comes to words like *aisle* or *awry,* for instance. The visual analysis of the word *cathedral* is rather unsatisfactory, since *cat* and *he* do not quite produce the needed result and since *the* (in this particular spot) does not have the *th* sound of the article *the.* If the reader uses syllabication, he at least avoids the *cat* mistake. Older students can often get the meaning of a word by pronouncing it by syllables, without using phonetics.

Even though the syllabication and visual-analysis attacks are inadequate for the complete solution of *cathedral,* the reader who makes such attacks may arrive at the correct word. The main reason for his not doing so may be ignorance of the meaning of the word. With all the variations in accent, syllabication, and phonetics in the English language, it is unreasonable to expect a person to pronounce a polysyllabic word correctly if the word as an idea and as a sound is foreign to him.

If the student makes errors in his reading that are due to stuttering, lisping, speech habits stemming from a foreign background, or any other speech error, the problem is one of speech and not of substitutions in reading. The particular reasons behind the particular errors are the specific clues to the specific needs of the individual for specific instruction in word analysis skills.

If the substitution has been a wild guess, with no bearing on the form

of the word or the meaning of the sentence, the student needs exercise in word recognition and word analysis and in attention to the meanings of sentences through comprehension exercises.

If the substitution is a context guess, the student needs exercise in word recognition and word analysis.

If the substitution is partially correct, there is need for stress on the parts that the student was not successful in recognizing or analyzing. These parts may be the endings, middles, or beginnings of words; they may be certain phonic combinations (*ai, ea, ch, ing*); they may be a matter of visual analysis; they may be a matter of syllables that the student has skipped (*action* for *attraction*), and there may be a need for attack on words through division into syllables by practicing known words until technique is acquired, then attacking unknown words.

If the student made a substitution because he did not know the meaning of the word (ask him what it means) and because he did not know how to attack it, the problem is one of word recognition and word analysis, but primarily it is one of teaching him the meaning of the strange word.

If the substitution is a reflection of a speech difficulty, such as the substitution of *th* for *s, l* for *r*, check by engaging the student in conversation and seeing whether the problem is one of speech correction and not corrective reading.

For improved *word recognition* use the Fernald method. For word beginnings, middles, or endings make sentences in which the critical word must be completed: "It was a beauti___ day in May. The birds were sing___." Make completion sentences in which the word is to be inserted: "He cut the roast with a _____ knife." Give multiple-choice sentences and rhymes in which the proper word is to be selected: "He cut the roast with a _____ knife (curling, carving, canning, curving)." Have the student make sentences illustrating the troublesome word, and read aloud some prepared passages containing troublesome words.

In general, have the student develop lists of words bearing the characteristic that he has found difficult. Let each list start with a word he knows well so that it will be a clue to the phonic solution, the visual solution of the other words as he meets them and adds them to his list. After the student has read some material through successfully, have him skim through it to circle or underline the parts of words of which he is making a special study: all the *-ate*'s, the *-ing*'s, the *pre-*'s, etc. If the difficulty seems to come in attacking longer words, have the student practice syllabizing such words, beginning with words he knows well. Have him use the dictionary and make his own dictionary; thus he gains an appreciation of the likenesses and the differences in words.

Omissions. The omission of words or parts of words in oral reading is sometimes evidence of hopeless haste over trouble spots, areas in the reading material in which the reader encounters considerable difficulty. It is

words easily and has to sound them out or fails utterly to identify them, the problem is probably one of word recognition and word analysis.

If the student stutters or stammers and if the pattern of repetitions seems to reflect this speech defect, the problem is probably one of speech correction rather than of reading.

If the student makes repetitions when he is reading material in which he knows every word, have him read silently for main ideas of chapters or general outline of plot. This may be an interesting account of something he already knows well. Give him opportunities to read aloud, chorally, material easy for him. Emphasize phrasing, grouping of words into thought units. After he has read a passage of difficult material and has become acquainted with all the words, have him practice reading it silently in a short time and then reading it orally with smooth phrasing.

Failure to Try to Pronounce a Word. A poor reader encounters words that he does not readily recognize, can solve only partially, or cannot solve at all. In such cases he may halt, look hard, scratch his ear, clear his throat, by utterance or attitude indicating intense concentration on an impossible situation. The result is usually a respectful pause, a look at the teacher, who may furnish the word, and continuation of the reading.

In some cases the reader feels completely cowed by a strange word. Long experience with inadequate word attack has discouraged him; when he comes to the hard word, he will simply stop dead, whether he is reading silently or orally. The reader who has been taught that guessing from context is a sin will make no attempt to determine its identity other than a futile pause for analysis of the word itself. The teacher notes his lack of word attack skills. For instance, if he misses the sound *ch,* see whether he knows other important sound combinations and give him appropriate exercises. Likewise, a reader who, through too much difficult reading, has developed a system of word calling, attacks each word without a context clue to its meaning. Thus, in the case of the reader who lacks confidence, the problem is to find out what he does know about word attack and to help fill out his sight vocabulary and his techniques of solving strange words; with him it is also a matter of building confidence through much easy reading. Readers who fail to use context clues to assist recognition of words should be given experience in the use of clues as well as help in word recognition and attack. Readers whose attention is obviously not on the content of what they are reading, and who hence make no use of the context to suggest the identity of the strange word, need an emphasis upon comprehension of what they read.

If, however, the reader does make some partial attack upon the word, whether he gives the wrong sound to an initial *c* or makes an inadequate attack upon the first syllable, the examiner should be careful to note it. Any attack is evidence of what the reader does know or what he knows

incorrectly. It is the starting point of an investigation of that word and of words resembling it to find out where the trouble lies and what is the extent of the deficiency. Sometimes the difficulty is not inadequacy of techniques but lack of independence in the use of them. Encouraged by a few pointed questions from the teacher, the student may be capable of solving the word, and the remedial work can be built to cultivate this independence. More and more, require him to solve words without help, reinforcing his successful attempts with, "I knew you could do it." Prepare him for attack upon difficult words in his reading material so that he will seldom experience failure.

Insertions. An enjoyable problem from the teacher's point of view—if any problem may be called enjoyable—is the insertion of words, an embroidering of the author's ideas. In its most attractive form it is found in the young reader who takes "the old lion" and makes of him "the great big hungry old lion." In oral reading the evidence of ornamentation is in the words the child says; in silent reading it is to be found in the child's interpretation of what he has read. This tendency as an evidence of keen appreciation of the material read is certainly to be cherished; in the extreme, however, it falls short of a standard of accuracy which is, of course, desirable in oral reading. Sometimes, as in the case of omissions, the insertion is merely a by-product of a previous error. The reader makes one mistake and then, in the interest of sense, adds and subtracts and modifies subsequent words. The problem is one of standards of oral reading or reading accuracy as well as of improved word recognition and attack. Much unsupervised silent reading and little check on accuracy will lead to a number of bad habits, of which insertion is one. The reader may become not only careless but unaware of his carelessness. To make the reader conscious of his error and to provide motive and experience for improvement are the remedial tasks.

The teacher should notice whether the insertion follows an error in word recognition and serves to make sense out of the nonsense that the error has created. If so, the problem is one of correcting the difficulty in the previous word. If, however, the insertion is an imaginative elaboration of the text without reference to a previous error, the student needs correction lest he mistake his own interpretation for the words of the author. In this case have him read to answer questions that draw attention to specific details: "Did the author say the lion was old? Prove your answer." Give exercise in prepared, accurate oral reading in radio broadcasts, assembly programs, club meetings, and special reports, where pride is involved. Have a little carefully prepared oral reading instead of much mediocre, inaccurate reading. Have the student read a passage, write down the details that he recalls, then check to see for himself what insertions he has made that the author did not give in the passage.

If the student has had to figure out each word as he has read along, the problem is one of sight vocabulary; if he has had to figure out each word and has been poor at doing so, the problem is one of word analysis.

Word-by-word Reading. The dead-level utterance of one word after another with no grouping of closely associated words—in a prepositional phrase, for example—is what we call word-by-word reading. The spacing of the words in time is either uniform, without regard for meaning, or in violation of it. It may also be characterized by long pauses between certain words.

We are all word readers when we encounter material much too difficult for us. In the case of the poor reader, material that should be suitable for him may be read word by word because of a meager sight vocabulary or the presence of words that he does not readily recognize. Encountering a strange word, he may be so inexperienced in independent word attack or so poorly equipped for it that he will read haltingly. These are problems in sight vocabulary and word solving.

Fairly good readers may retain a tendency toward word-by-word reading. In their early training they may have been urged along with reading matter very difficult for them and have become rooted in the habit of reading as though in difficulty. Sometimes word-by-word readers have been developed because no standard, no feeling for the audience situation or the drama of the piece had been created. Sometimes embarrassment or timidity has driven all other feeling out of the oral reader. Another cause of word-by-word reading is the lack of knowledge of or attention to punctuation marks. This, too, is a matter of emphasis and training.

If a student has had little experience in reading silently to comprehend or if in oral reading he is made to give no account of the meaning of what he has read, he may read in a word-by-word fashion; he may fail to think of meaning as he reads. If, too, he is unfamiliar with the ideas expressed in the material, he may show the same tendency to read monotonously with no regard for meaning or to read with expression that reveals his lack of understanding.

To determine which of several reasons may be the cause for word-by-word reading, the reading teacher should make use of information on previous schooling, the student's own account of his reading habits, and the student's explanation of the meaning of the material read.

If the student reads easier passages fluently but lapses into word-by-word reading with more profound material, attacks the words easily but reads without expression, and, on questioning, shows that he does not understand what he has read, the teacher should ask him the meaning of certain key words to see whether the weakness is a matter of concepts. If it is and if this is the type of material that he is having to read in class, the job is one of anticipating hard new words in the material, having him skim to help find them, and having him develop a personal system of

finding the meanings of the words through the dictionary or through context. Give him, and have him make, illustrative material to give greater vitality to the subjects about which he reads. Have him read about the same subject in a textbook that develops the new ideas concretely and gradually. See whether the student knows all the difficult words but has trouble understanding the long involved passages and complicated structure of the author's style. If so, have him take an easier text to read on the subject before he attempts to read the harder book. Have him take the complicated sentences, piece by piece, tell what each part means, and gradually piece the entire meaning together. If he knows sentence structure, have him do this by finding subject and predicate, expressing their meaning in his own words, and then adding, phrase by phrase and modifier by modifier, the meanings in his own words. When he has finished with such a sentence and knows what it means, have him read over the sentence silently and then aloud, showing by his voice the grouping and the meaning of ideas.

If the student appears to suffer embarrassment in oral reading and if no other cause seems responsible for his inexpressive reading, try to create more informality in the situations in which he must read aloud and give him more opportunities of this sort. See to it that he is never asked to read without having prepared the material silently first.

The student may read all material, regardless of ease, in a monotonous, word-by-word fashion. If his experience has apparently consisted in reading books too hard for him among groups of children who were always ahead and always better, so that he has been dragged by the hair through continuously hard reading situations, use easier material than the silent-reading-test score indicates. Be sure that it is highly interesting to him; if it is fiction, it should have a good, clear, exciting plot. Give the student experiences in choral reading with the class, with emphasis on expressive phrasing. Have him read parts in book conversation in which he must express emotion and carry the feeling and personality of the character with his voice. Before he tries it, have him describe how the character would say it. Let him try it privately before trying it publicly.

These brief suggestions for interpreting the errors a student makes in oral reading and for planning remediation can be supplemented by the many helpful ideas contained in the references at the end of this chapter, especially the recent books on elementary school reading.

VOCABULARY

Word and thought are—or should be—inseparable. The Greeks, recognizing this fact, had one word, logos, for our two separate words. The skillful teacher helps students to make word and thought one in the reading process.

Ways of Building a Vocabulary. It is easier to do this if words are learned in natural situations when they are needed. The importance of firsthand experience justifies our emphasis on providing a variety of activities in which new and important words are illustrated, demonstrated, and used. Thus a visit to a modern dairy will provide a basis of experience for understanding the words *sterilize, pasteurize,* and others relating to milk production. These newly introduced words should be pronounced and written on the board and in reports of the visit; they should be noted when they occur in books and articles, and should be used in conversation. A teacher in a university high school takes his classes on trips to the cafeteria and its kitchens, the engine room, the horticultural laboratory, and other places of interest on the campus. Later they visit industries, police stations, electric plants, and other institutions in the community. Before going, they write a letter requesting permission to visit and make an outline of what they want to see and the questions they wish to ask. On the trip they take pencils and cards on which they list the new words and expressions that they learn. Later they copy the new words in their notebooks and read books and pamphlets that have a bearing on the trip.

Students may illustrate the meaning of words from their own experience; by an experiment; by impromptu demonstrations, pantomimes, and riddles; by charts showing the relationship of the new concept to the subject as a whole. There is no substitute for learning new words through experience and use.

Next best to firsthand experience is the recall of experience. The teacher may write a few key words on the board and ask the students to share the experiences that they have had with each word—where they have heard it, in what connection, with what meaning. In this way the teacher discovers the degree of correct meaning that the students are bringing to the printed symbol, and, besides, the word gathers rich associations from this personal aspect of word meanings.

When asked to tell how they remembered the meaning of certain words they had been taught in class, sixth-grade pupils reported associations with experiences, persons, words, and things. For example, some said they remembered *defiant* through association with a motion picture, *The Defiant Ones.* One child said he remembered *unanimous* because "we voted for a new class president last month. Everyone was in agreement on one person and the teacher said, 'It's unanimous; he's elected.'" According to their introspective reports, they remembered best the meanings of words that were related to them personally or made vivid by relating them to experiences close to their daily lives [9].

Another way of sharing word experiences is through a class dictionary. This is a large loose-leaf notebook, in which one page is devoted to each word. The committee in charge of this dictionary receives contributions

of sentences or paragraphs in which the word occurs, statements of its multiple meanings and derivations, and pictures or cartoons illustrating it. Looking for illustrative material and clippings gives students practice in skimming and encourages newspaper reading. Several words illustrated by clippings and original drawings may be put on the bulletin board daily before they are pasted in the class dictionary. A rotating dictionary committee may be appointed to look ahead for new words in the next assignment. Members of the committee should represent varied vocabulary abilities so that all kinds of difficulties common in the class will be anticipated. Some students may be interested in making a dictionary of their own or in keeping an individual record of new words learned.

Closely allied to firsthand experience is the vicarious experience obtained from wide reading. This is the way most adults have acquired their large vocabularies. Each new book, each new field introduces words to the reader. He learns new words as he reads. Through the reading of much easy material, such as well-written, well-illustrated supplementary books, the few difficult words that are used ultimately become commonplace and meaningful. In more difficult books the students may note the words in the author's vocabulary that will continually cause difficulty if not mastered.

If the passing attention given to words as they are read is not sufficient to fix them in mind, the use of vocabulary cards may be helpful. As students read, they may lightly check important words with which they are unfamiliar. Later they may go back and write each word on a 3- by 5-inch card. On the back of the card they write the sentence in which the word was used, the dictionary definition, and the derivation, if they wish. They use these cards for drill—looking at the word, trying to recall its meaning, then looking at the other side to see whether they are right. Elementary and junior high school students use these or other types of flash cards for playing games with one another, counting the number of correct responses as the score.

Although the teaching of words in isolation is usually wasteful and inadequate, the value of a certain amount of direct, systematic, well-planned study of words in context has been frequently demonstrated, and is necessary for seriously retarded readers who can make little progress without a basic sight vocabulary [2]. The Dolch basic vocabulary of 220 words makes up 50 per cent or more of the reading matter used in elementary school [7]. In one school each department prepared a list of the words considered essential for comprehension of the subject and included in the final examinations a question on the meaning of these words. After a word is presented to the student, if he has difficulty in pronouncing it, instruction in word recognition should be given, and the student's understanding of its meaning should be checked.

Students may also be interested in unusual word origins [18] and in

finding out which of our English words come from Latin, French, or Celtic sources. Many students read a syndicated newspaper column in which the strange history of a word was told each day. One gifted young teacher asked each of the students in a sophomore class in world history, where they had been studying hieroglyphics and cuneiform writing, to bring to class a simple message in a code or sign language of his own concoction. Their immediate response was that they couldn't do it, but when they were given a little guidance they produced amazing results. Each student wrote his message on the board and gave the class the key or alphabet with which to work it out. It was a thoroughly enjoyable procedure and helped the students to realize that written language is, after all, only a set of symbols to which we give meaning, and that the thoughts that these symbols evoke are not really represented by the symbols themselves but by our interpretation of them.

This general interest in words may lead to specific word study—the study of common prefixes, suffixes, and roots that suggest meanings; the study of synonyms and antonyms. After reading passages containing difficult words, the class may discuss the meanings suggested by the context, learning how to determine when it is safe to guess and when it is not, and what constitutes a foolproof clue. Students may write paragraphs of their own, containing new words, to be interpreted by the class. This exercise not only brings out words that the class does not understand but may also reveal misunderstanding on the part of the student who has written the paragraph.

Word study should be followed by use of the word in written and oral reports and in casual conversation. If the teacher uses the new words frequently, they become familiar to the students, who, in turn, are more likely to use them in the daily class discussions.

Numerous word games have been suggested for vocabulary building—making as many words as possible from a few common roots (*fero,* to bear; *tendo,* to stretch); adding prefixes and suffixes to these stems to see how their meanings change; doing crossword puzzles; participating in vocabulary quiz programs and vocabulary bees. For example, a group of retarded readers in junior high school enjoyed the following game: Cards were made of words they had used in writing their reading autobiographies. The students read these cards to find answers to questions such as: Which word means the same as *job* or *occupation?* Which word is the name of a job or occupation? Which is an occupation a girl might choose? Which is the name of a kind of school? Which is the name of a subject studied in school? Devices of this kind increase young students' interest in words, often lead to more frequent use of dictionaries, and make new words a challenge instead of something to be feared or skipped. "The best way of all to improve your vocabulary," Edgar Dale said, "is to get fun out of words" [4]. *Practical English,* published by Scholastic Magazines, Inc., New York 36, New York, includes a number of pages

of reading and vocabulary quizzes, puzzles, completion and matching exercises, and other ingenious word games of interest to high school students.

There are many ways of arriving at the meaning of words in context [3]. When a group of able learners in high school came upon the unfamiliar word *astronaut* in the title of a magazine article, the following discussion took place:

TEACHER: Is there any clue as to meaning of this word? Look for clues in the sentence in which it is used.

STUDENT: *Astro* pertains to stars.

TEACHER (writing sentences on the board): The astronaut *lived* on a *space* diet. (As students recognized clue words, the teacher underlined them. They are shown here in italics.)

TEACHER: The astronaut was *trained* to *ride* in a space missile. What are other words that begin with *astro*?

<div align="center">astronaut, astroids, astronomy, astrology</div>

STUDENT: Astronaut is one who travels in the air.

TEACHER: Do you know words that begin with *naut*?

STUDENT: *Naut*ical, *naut*ilus.

TEACHER: What can you do to get meaning of unfamiliar words?

STUDENT: Look for clues to meanings in sentences and words.

STUDENT: Sound the word out—break it into syllables.

STUDENT: *Define* it to yourself or *try out* the meaning in the sentence.

Vocabulary is also effectively taught in connection with the following lesson.

TEACHER: Words that help to bridge the gap from one thought to another are called "transition words." Copy and complete the following incomplete sentences:

1. Paul has worked hard all year. Nevertheless, _____
2. Paul has worked hard all year. However, _____
3. Paul has worked hard all year. Moreover, _____
4. Paul has worked hard all year. Accordingly, _____
5. Paul has worked hard all year. In fact, _____
6. Paul has worked hard all year. Therefore, _____
7. Paul has worked hard all year. Consequently, _____
8. Mary watched television for three hours. Nevertheless, _____
9. I enjoyed reading that book. Nevertheless, _____
10. Bob won the race. Nevertheless, _____
11. Grace finished the work on time. Nevertheless, _____

TEACHER: The word *transition* means *to carry across*. Other words that could be used for this purpose are

| nevertheless | | moreover | |
| however | } but | | } in addition |

consequently			
therefore	} as a result	in fact	} really
accordingly	} so		} truly

It is also necessary to help some students realize how limited their vocabularies are—to what extent they are skipping or depending solely upon the context. One way to help them perceive this is to ask them to underline, on a page or two, the words that they do not know; then give them a test on all the potentially difficult words in these pages. After they have marked the test, they compare the number of words marked as unknown with the number of those that were missed on the test.

To make the student more aware of the complexity of word meanings, Richards [20, p. 12] suggested a set of scales—measures by which to mark a word's variations in meaning along a number of coordinates. To increase the student's awareness of the wide range of meanings that a single word may have, have him collect all the diverse correct meanings that he can find for a given word. Look up some words in an unabridged dictionary and count the number of different meanings—some almost unrelated—that each word may have. Make families of words related in some way, for example, words that show the different degrees of feeling with which one may regard a person—*tolerate, accept, like, love, adore.*

In many groups the use of the dictionary should be taught. Very few students know all the fascinating kinds of information that can be found in a dictionary or have learned how to turn to words quickly. Some need help in recognizing the initial letters of words and in using the guide words at the top of each page.

Teaching-testing Vocabulary. Certain types of vocabulary tests involving discrimination and interpretation of meaning may be even more valuable for teaching than for testing. The following type of test is different from the ordinary multiple-choice test in that each response, except the correct one, represents a certain kind of error. One is a completely wrong response; another is a correct dictionary definition, but not the correct meaning in the context given; the third is a word that is similar to the test word in form but different in meaning.

Directions: First try to guess the meaning of the word from its context in the sentence. If necessary, use other methods of word recognition to get the meaning. Then underline the response which you think is correct.

1. On the lay level an *astute* person may learn a great deal about a student's reading ability.
        discerning   stupid   abstract   crafty

2. Clinical procedure is not synonymous with *dexterity* in the use of instruments and devices.
        clumsiness   dextrality   skill   alertness

Another type of test exercise encourages interpretation and calls attention to shifts in meaning by means of several questions.

Slow-motion Study of Words and Sentences

1. "Reading may be one of life's inexhaustible pleasures and blessings but may also become a mere habit, an escape from thinking or a drug."—Walter

de la Mare, *Early One Morning in the Spring,* p. 316, The Macmillan Company, New York, 1935.

Give the literal meaning (denotation) of this sentence.

Who said it?

What was his mood and purpose?

When did he say it?

To whom did he say it?

Give your interpretation of the passage.

2. "Language is an inventory of human experience."—L. W. Lockhart, *Word Economy: A Study in Applied Linguistics,* p. 56, Kegan Paul, Trench, Trubner & Company, London, 1931.

[*Similar questions*]

3. "I only took the regular course," said the Mock Turtle with a sigh.

"What was that?" inquired Alice.

"Reeling and Writhing, of course, to begin with," the Mock Turtle replied; "And then the different branches of Arithmetic—Ambition, Distraction, Uglification, and Derision."—Lewis Carroll, *Alice in Wonderland.*

[*Similar questions*]

Like other remedial measures, these exercises in vocabulary are to be applied when and where they are appropriate. Many other suggestions for improving vocabulary and other reading abilities will be found on other pages of this book and in the references at the end of this chapter.

Vocabulary Difficulties. The teacher cannot correct vocabulary difficulties intelligently unless he recognizes the sources of the trouble. Some of these reside in the author's failure to recognize the difficulty of his own general vocabulary—its abstract words, figures of speech that are difficult to interpret, varied wording that throws the student off used for literary effect. Sometimes the author packs ideas so close together that no perspective can be gained, no context clues are presented, no concrete illustrations or explanations are offered, and no hints are given of the relative importance of the various facts. Many vocabulary difficulties might be avoided if the author would present the necessary technical words in the context of a familiar general vocabulary and if he would define and illustrate new words and repeat them frequently.

Other difficulties reside in the teacher and the school program. The elementary school reading program may be confined to a well-controlled reader series where every new word is carefully anticipated or to the use of one textbook, one author's vocabulary, instead of broad experience in independent, individual reading. Some teachers may present vocabulary building as an unattractive chore.

Some sources of difficulty may reside in the student: little voluntary reading; association with children and adults whose language holds nothing new for him; narrow interests in general and in books specifically, oral-language handicaps; and the habits of skipping over hard words, of ignoring context clues, and of depending on class discussion for enlighten-

ment of hard words. Abhorrence of the dictionary and low intelligence also help to explain poor vocabulary.

In each subject the teacher could help by providing experiences that pave the way for new words. He should use the new words in the same way in which they are used in the text and call attention to common words that have a special meaning. He should also show the student how to use the illustrations and other vocabulary helps in the textbook. The student will be more likely to master the new words in each subject if he writes or underlines new words as he meets them, notes parts of the word that suggest its meaning, learns the definition and the function of the new word—what it *does,* as well as what it *is*—, observes the illustrations provided variously in words, maps, charts, pictures, and their legends. He should note relationships of this word to other topics and make the new word his own through writing, discussion, illustration, experimentation.

LITERAL COMPREHENSION

The remediation of comprehension difficulties, as well as of vocabulary difficulties, requires some appreciation of the reason for their existence and an understanding of their particular nature.

Some of the sources of difficulties in comprehension reside in the author's writing—his poor organization; lack of stress to designate main points; confused thinking; too many prepositional phrases and complex, compound, and inverted sentences. Lack of comprehension may also be due to the difficulty of concepts involved. Unfamiliarity of the topic and the vocabulary and the lack of helpful illustrative materials, concrete examples, and appropriately placed and worded definitions are other possible reasons for difficulty in comprehension.

The teacher, too, may be at fault in giving too much word drill to the neglect of silent reading for understanding. He may neglect giving specific help in reading for different purposes in different subjects. He may use reading material too difficult for the student to read successfully. The teacher may also fail to identify the causes of difficulty and to develop in students the ability to concentrate for long periods of time.

Nor is the student without responsibility for achieving better comprehension. If he tends to ignore unknown words; if he fails to suit reading technique to the purpose for which he is reading and to evaluate the author's point of view or emphasis; if he does not retain an orderly mental picture of the sequence of events or relationships of dominance and subordination among ideas; if he skips over passages whose meanings are not clear, he will not develop effective habits of comprehension. As specific aids to comprehension he may make use of headings, footnotes, index, illustrations, questions, and other helps to meaning and take notes on, underline, check, discuss, repeat, or otherwise reinforce the memory of the ideas read.

It is easy enough to say, "Learn to find the key words and the main ideas," but it is more difficult to give instruction as to how to do this. Paying attention to headings and italicized words is helpful, of course. The author may give a clue as to which words he thinks are most important, sometimes by using these words frequently and providing illustrations of them, and sometimes by his statements, as, for example, "The most important economic needs are food, shelter, and clothing."

An understanding of the structure and function of paragraphs is helpful. A quick glance at the paragraph will show whether it presents the key idea in the first or the second sentence or in a summary sentence at the end; whether it is a paragraph presenting two contrasting ideas, whether it contains nothing but an illustration of a generalization made in the previous paragraph, or whether it is loosely constructed without unity or emphasis. Given the topic sentence, the thought may be developed in several ways—by repeating the idea in other words to clarify its meaning, by denying the opposite point of view, by giving examples, by breaking the topic into parts and developing it detail by detail, by comparing or contrasting, by exploring causes, or by stating its importance. These items, put in question form, may be used by students as a guide to the analysis of paragraphs [16].

A teacher used the following paragraph for instruction: [1]

The moisture and temperature of the air we breathe are important for health. History relates that in the middle of the eighteenth century a Nabob of Bengal, India, packed 146 prisoners in a small dungeon where all but twenty-three perished during the night. Until recently it was supposed that they died for lack of oxygen and from the presence of carbon dioxide. It is now believed by many scientists that if the temperature of the air of the dungeon could have been kept at about 65° F. and the humidity kept low, the loss of life would have been greatly reduced [5, p. 71].

Before the class came in, the teacher wrote on the board the most difficult words in the paragraph. Her first question was, "Where have you seen or heard these words before?" The purpose of this question was not to elicit definitions but to invest each word with associations from the experience of the class. For example, *temperature* was first associated with the classroom. One boy went to the thermometer and found that the temperature was 74° F. Several pupils said the proper temperature for a room was between 65 and 70° F. One boy opened a window to lower the temperature. In solving this practical problem of an overheated room, teacher and pupils used the word *temperature* a number of times. One girl associated *dungeon* with her recent reading of *Ivanhoe,* and gave a detailed description. Another connected *humidity* with the weather reports which he always read in the newspaper. All agreed that humidity was higher on August dog days than on clear, cold days.

[1] Quoted by special permission of Holt, Rinehart and Winston, Inc., New York.

After this preliminary pooling of experience, the paragraph was given to the pupils to read.

The pupils' written responses to the teacher's request for the main idea showed their need for instruction in paragraph reading. Some gave very vague general statements: "This paragraph is trying to bring out what took place in the eighteenth century and what the results were." Perhaps this type of response has been encouraged by teachers who allow pupils to get by with innocuously vague answers. Many focused on the Black Hole of Calcutta incident as the main idea: "The point of this paragraph is to show the right humidity and temperature of a dungeon, which should have been 67° F."

Several serious inaccuracies occurred: "The paragraph says that in the eighteenth century there were put 146 prisoners in a dungeon and over-night 23 died. Scientists said that they died for lack of oxygen." The first inaccuracy was apparently due to the underpotency of the words *all but*. The second inaccuracy may have been caused by inability to note and give proper weight to time relationships—*at that time* and *now*.

Only a few found the main idea expressed in the topic sentence—"The moisture and temperature of the air we breathe are important for health."

Almost any type of paragraph will evoke a wide range of responses— vague generalizations; inaccurate conclusions; the main idea plus some supporting detail; details only, some accurate and some inaccurate; and interpretation influenced by the pupils' own experiences, hopes, and fears.

The teacher read some of these responses to the class and asked the pupils to decide which were the best and why. The pupils who made poor responses were not identified, but those who had grasped the main idea of the paragraph were asked to tell how they did it. With the teacher's help the class worked out a simple analysis of paragraph structure and noted various ways to distinguish the main idea from illustrations and supporting details. Later the teacher noted which pupils had misspelled words such as *temperature* and *humidity* and gave these pupils some help in dividing words into syllables and making a spelling file for key science words.

In describing their methods of reading science material, high school students frequently say something of this sort: "I read the lesson fairly rapidly but carefully, slowing up over difficult parts." "I read fairly slowly. If there is a complicated section, I read it over until I do understand it." One student who read with excellent comprehension a science article about the method of chromatographic adsorption described his method as follows:

I read more slowly than usual because the material was not very familiar. I fixed in mind as well as possible the materials used in the method described and the facts about its invention and use. I tried to recall some of the work I had done in biochemistry and remembered using the method described in

testing for vitamins. I tried to understand what the author had in mind, used my own background, and tried to get a picture of the whole sense of the article with the main ideas in the foreground. When I came to details I thought important, I stopped and tried to fix them in mind.

To help college students read science material, a manual describing the kind of thinking involved in reading technical material and providing practice in the special skills is helpful [15]. As a guide to the most often used words in science textbooks, various vocabulary studies have been made.

The first step in reading a longer passage or chapter is to *understand its structure*. Otherwise, the reader does not know what to select as important and what to pass over as unessential. A class period spent on an exercise such as one from *Study Type of Reading Exercises* has proved beneficial. The teacher says, "You will have one minute to get the structure of the exercises as a whole. Read the first page quickly to find out what the exercise is about; pay special attention to italicized words. When you have a hunch as to the probable structure of the passage, read the first sentence of each of the other paragraphs to see whether you are right." When the minute is up, the group will give their ideas of the structure of the passage and discuss the methods they used. During the period the class may read three or four other passages in the same way and then summarize all the suggestions for obtaining quickly the structure of a chapter or a section. The next step is to use this newly acquired sense of structure in subsequent reading. Longer selections and a new book should be studied in the same way.

Anticipation of what the author is going to say sharpens interpretation and usually increases concentration. Students like exercises of the following kind: "Before reading this chapter, think what you would say if you were the author writing it. Then read the chapter and find out how closely you and the author agreed."

Skimming is a useful but much-abused technique for gaining certain kinds of information quickly. Skimming is not careless, inaccurate reading. Whatever the nature of the material or the purpose in reading, the reader should emerge with definite, correct ideas or impressions of the passage. Skimming may be described on a scale ranging from the least to the greatest amount of information to be obtained. At one end of the scale would be skimming to locate a particular date or name; next in order would be skimming to locate a particular fact; then skimming to get the general structure or skeleton of the article or book; skimming to get all the facts or points of view bearing on a particular problem; skimming to get the heart of the book; and skimming to get a fairly detailed pattern of the author's thought.

The reader gains in facility as he becomes familiar with a certain kind of book. For example, a person who is sophisticated in reading novels can

tell from very few clues what is coming next and how the story will probably come out. The more background one has in a field, the easier will it be to skip and select judiciously.

Paragraph outlining—writing one sentence only for each paragraph and attempting to link these sentences into a growing pattern of thought —helps many students to increase their speed by judicious selection of key ideas. They find that the topic sentence frequently tells all that they need to know.

Exercises using passages in texts, reference books, magazines, and newspapers as practice material may be easily prepared. The passage is selected and appropriate questions are formulated. Then the student is asked to skim the passage in order to find the answers. He may be timed or limited to a certain number of minutes. Exercises may be quickly prepared from newspaper clippings. Select clippings of interest to the students, prepare questions appropriate to the article, estimate the time needed for skimming. The article may be pasted on one side of a page and the questions written or typed on the other side. Students may get these loose sheets to read whenever they have spare time or whenever they feel the need for this kind of practice.

Although the printed page presents the same words to each reader, each person emerges with a somewhat different impression of what the author has said. Attitudes influence interpretation. The individual reads with his emotions as well as with his mind. His attitude toward reading itself is also important: "Read not to contradict, nor to believe, but to weigh and consider."

Comprehension also involves an understanding of the way in which associated ideas, either modifiers in the same sentence or in associated sentences, determine the meaning of a particular word. To increase students' appreciation of this influence, exercises may be prepared, such as the following:

He _____ into the room.
With head high he _____ into the room.
With head high, like a king, he _____ into the room.

Any one of a large number of words might be inserted in the first blank. In the second blank, choice would be limited to such word as *strutted, swaggered,* or *strode.* In the third sentence the verbs that could be appropriately inserted would be still more restricted.

The improvement of thinking during the reading process may be fostered through practice in reading to answer thought questions, reading to discover implied as well as explicit meanings, reading and applying the content of the selections to new situations, and reading for the purpose of solving problems. More formal exercises applying logic to reading have also been devised [23]. These kinds of reading are not very well repre-

sented in the textbooks that have been published for use in corrective reading. These applications and by-products of reading will be considered in the next chapter.

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CHAPTER 17

Higher-level Reading and Study Methods

If a student is to derive value from or make use of the content of reading material he needs skills beyond those required for word recognition and literal comprehension. He must be able to appreciate literature and read critically. He must also have study methods and skills appropriate for reading certain content.

INTERPRETIVE READING

Appreciation of literature requires some depth in interpretation of words, phrases, and sentences: What meanings have grown up around the word? What special meaning is given to the word in its context? A class may begin with the interpretation of advertisements; then go to simple figurative and metaphorical expressions in common use, such as "the cold war," "the iron curtain," and finally to the interpretation of poetry.

Students need instruction in the interpretation of literature. The general procedure may be as follows:

1. The class works together in the study of certain pieces of literature, the teacher giving instruction. Together they look for clues, symbols, and relations. They make inferences about characters and plot from direct statements; from colorful descriptions of a person's appearance, voice, and actions; and from the setting or atmosphere [11]. The students repeatedly go through this process

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of recognizing clues and making inferences from them until they have gained proficiency.

2. Then they all read a selection outside of class and report to the class their discoveries and synthesis.

3. After having learned to read in this creative way, they apply the method in their independent reading, thus getting greater pleasure and value from their outside reading.

A high school student perceived and appraised this method of teaching as follows:

At the beginning of this term, I was very vague on the deeper meaning; I really didn't think there was any. But our teacher first lets us read a story and asks us to interpret it and write a composition giving our interpretation. Then, when we come to class, she asks us questions about it and gradually—I guess she sort of steers the conversation—we come out with the really deeper meaning. I think it's very enlightening because now, when I read books for pleasure, I start thinking about them, and wonder if there are any deeper meanings, and I start looking for them.

Able learners should be encouraged to read books for their deeper meanings. In reading such works as Thoreau's *Walden, Golden Boy, The Great Gatsby, Heart of Darkness, Portrait of the Artist as a Young Man,* these students should be encouraged to investigate where the leading character derives his values. They should be asked to analyze the philosopher's sense of responsibility and relation to the group in the *Trial and Death of Socrates* or *Brave New World.* Why is there evil in the world? Why must man suffer, as in the Book of Job and its modern version *J.B.,* by Archibald MacLeish, in Greek tragedy, Shakespeare, and in certain contemporary tragedies?

After having had the experience of searching for deep meanings, students of their own accord do more serious reading. One high school senior said—

We've been reading Dante's *Inferno.* Right now, I'm reading the *Symposium.* I believe, if you give a student freedom and don't enclose his mind and tell him he's got to do this and he's got to do that, then he doesn't feel any resentment toward the teachers. He just feels as though he had a field day and he'll go out and read books that he's interested in; and once he does that, I've noticed it's sort of a chain reaction. One book will lead to another. I know it's happened to me. For example, I have a hobby—I build model airplanes —and while doing that I read about pilots, countries, and wars. From there I went to economics and military leaders. And soon I had a whole library in the palm of my hand.

Reading great literature is a form of experience. These books challenge students' curiosity about life experiences. They widen their experience vicariously and help them to find themselves. Too often we underestimate the ability of students to think and feel deeply. The interpretive process

in reading can best be studied by retrospective and introspective technique [16]. Students may be asked immediately after completing a reading exercise to describe in detail their method of reading it. Or they may be asked to write a composition on how they read an assignment in different subjects. Even better is an interview situation in which it is possible to elicit introspection while the student is reading a given passage. Knowing the student's unique approach, the teacher can help him to recognize, evaluate, and improve it [17].

CRITICAL READING

Critical reading cannot be divorced from thinking. Thinking involves seeing a problem in a fresh and open-minded way and systematically trying to solve it. The first step, therefore, in teaching students to read critically is to provide a problem situation. For example, many students do not think critically about their history lesson because it is not made real and personal to them. This can be done by the radio "You-were-there" technique, presenting past events as a problem situation. The students relate the past event to their experience, feel with the people involved, and try to understand their goals and what helped or hindered them in reaching them. The students are encouraged to search for relevant facts, express their opinion of the way the problem was solved, and suggest other solutions and their probable consequences.

Facts are needed in critical thinking. John Dewey once said, "We can have facts without thinking, but we cannot have thinking without facts." After locating the facts the student must examine them for accuracy and relevance. Are the statements true, free from bias, fair-minded? Are they sufficiently specific for the purpose? Is the publication date recent enough to include new discoveries? What is the purpose or intent of the author? What are his claims to being an authority in this field? Is he impartial in his viewpoint?

While recognizing the value of opinion, the student must distinguish between fact and opinion and between a sound opinion and a superficial one. His attention should be called to clues that indicate opinion—"It is believed," and "Some authorities say." He must also recognize statements that will always be in the realm of opinion because they cannot be verified. He must further see relations among the facts and their relative importance in solving the problem, suspending judgment until he has a fairly sound basis for making it. Some common types of errors in critical thinking are—

1. Going beyond the facts in making an unwarranted generalization: "Parents put too much pressure on children."
2. Depending on a single authority: "The United States should send warships to Spain; my father says so."

3. Attributing results to a single cause: "I caught cold because I got my feet wet."

4. Oversimplifying a situation by saying it is "either or," all black or all white.

5. Not recognizing the different meanings that words, especially abstract words, may have in different contexts.

From the fifth or sixth grade on, students can learn to recognize propaganda devices [24]. Some of these devices are—

Omission of important facts

Highlighting or playing down of certain ideas through size of print used and position on the paper

Words, phrases, and sentences quoted out of context

Irony or sarcasm

Use of emotionally charged words

Half-truths

Exaggerated claims

We should not confuse critical thinking and reading with being critical in a destructive way. Critical thinking is often positive; it should be constructive. The best thinkers build up rather than tear down. They solve problems, they do not merely uncover them. In encouraging a student to think and read critically we should avoid developing a generally derogatory attitude toward everyone and everything.

It is not only the bright children who profit from instruction and practice in critical thinking. Children with less-than-average intelligence were found to profit most from lessons in critical thinking and reading [14]. *Reading for Understanding*, by Thurstone, provides practice in critical reading for elementary school children [40]. Teachers can build their own critical-reading laboratory—a collection of clippings, each one thought-provoking and often containing a false analogy to be detected, "a conclusion that lacks proof, a passage in which name-calling runs riot, a statement wrenched from its context" [39, p. 201].

Thinking is implicit in every aspect of reading [35]. Paragraph reading also requires logical reasoning. The main idea of the paragraph is the premise. The reader examines the evidence given in support of the premise, appraising it bit by bit. When he has a clear idea of the author's thought, he can compare it with his own impression and conclusion [35]. Thinking is still more obviously involved in drawing conclusions and in making generalizations, inferences, and applications. The teacher can guide the reader's thinking by suggestions, questions, and hints. The first questions direct the reader's attention to what the author actually said. The next questions relate the content of the selection to the reader's previous learnings: What would you expect to happen? Did John's decision seem reasonable to you? A third set of questions might relate to the implications of the passage: Do we still have a frontier for people

today to explore? A fourth group of questions invite speculation: Why do you think the United States has incurred the hatred rather than the respect and gratitude of certain nations?

After repeatedly demonstrating the thinking-reading-thinking process, the teacher may expect students to raise their own questions and formulate their own hypotheses. This process of guiding students into critical thinking while reading begins as soon as children become "on their own in reading" and continues until they have attained a high level of maturity in reading.

SPECIAL READING SKILLS

The reading of graphs, charts, maps, and tables is best taught in connection with the content of each subject. Accuracy in the reading of these special kinds of material can be checked by questions, as in the following illustration:

Reading a Graph

FLUID MILK

USED ON FARMS WHERE PRODUCED

BUTTER
CREAMERY BUTTER
29.2%

USED IN CITIES AND VILLAGES
30.8%

FARM BUTTER
6.0%

2.7%
ICE CREAM 4.4%
EVAPORATED MILK 6.8%
CHEESE
9.2%

FED TO CALVES ON FARM
DRIED MILK 0.4%
OTHER USES 0.8%
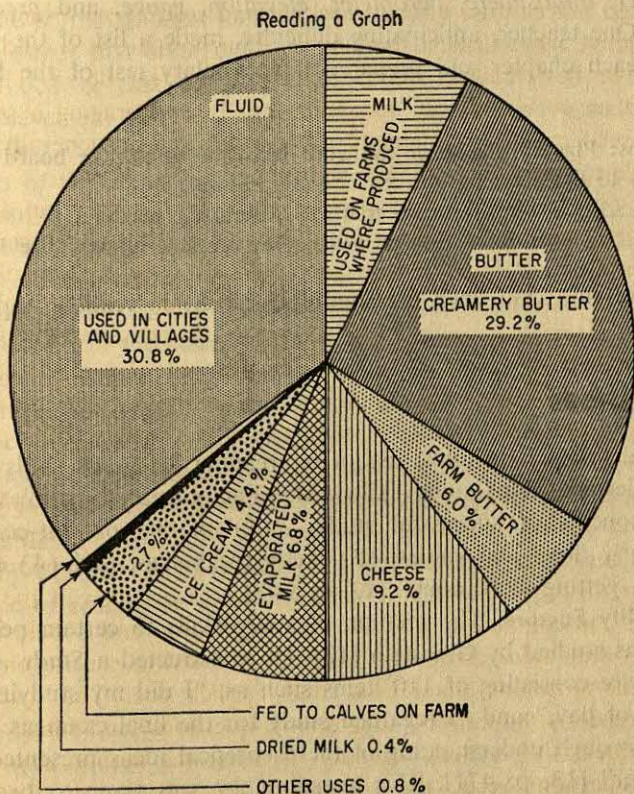
Directions: The facts needed to complete the following statements may be found by studying the chart printed above. Write the letter of the correct answer.

1. The percentage of milk used to make cheese was (*a*) 29.2, (*b*) 40, (*c*) 2.7, (*d*) 9.2.

2. The percentage of milk used for cheese was greater than the percentage of milk used for ice cream by (*a*) 4.8, (*b*) 2.8, (*c*) 23.2, (*d*) 9.7.

3. Of all milk used, the smallest percentage is that used for (*a*) ice cream, (*b*) farm butter, (*c*) dried milk, (*d*) feeding calves on farms.

4. The percentage of milk used as fluid milk is greater than that used for butter by (*a*) 4.4, (*b*) 6.0, (*c*) 29.2, (*d*) 5.3.

In each field certain words present difficulty because of shifts of meaning or specialized meaning. For example, *source* used in connection with the study of water supply is a hard word for many students, in spite of the fact that it is short and apparently simple. In biology, *to cross* may mean *to hybridize;* and *expose* has a special meaning when it is used in connection with bacterial plates. One girl, when asked to *draw* conclusions from an experiment, made a labeled diagram.

In a biology textbook for high school students such words as *altimeter, anemometer, atmosphere, barometer, elevation, gauge,* and *precipitation* occurred. One teacher, anticipating difficulty, made a list of the technical words in each chapter and prepared a vocabulary test of the following type:

Directions: Place in the space the word from the list on the board that best corresponds to the meaning of each of these phrases:

_____ The layers of air that are around the earth

_____ Instrument for measuring the amount of moisture in the air

A pretest of this kind uncovers stumbling blocks in reading a particular subject.

STUDY METHODS

If an individual is to make use of his reading, he needs skills that are generally designated as study skills [31]. Factor-analysis studies suggest four components of successful study: "(1) morale or self-confidence, (2) scholarly drive and values, (3) study mechanics, and (4) tendency to plan for getting work done" [12, p. 243].

Personality Factors. The relation of study skills to certain personality patterns was studied by Gladstein [13]. He constructed a *Study Activities Questionnaire* consisting of 110 items such as, "I did my studying at the same time of day," and "I regarded study for the final exam as the time to get a thorough understanding of the theoretical ideas presented during the semester" [13, p. 471]. This questionnaire was given to two groups of gifted college students. They were to choose one of the following words or phrases to describe their methods of study: "Usually or almost always, frequently, sometimes, rarely or never." The two groups studied

differently, yet both were academically successful. It was suggested that gifted students be encouraged "to use techniques suitable to their personality, rather than attempting to force them into a mold of 'good study habits'" [13, p. 473].

There is increasing emphasis on the importance of attitudes and the desires of the learner in effective study.

Specific Study Skills. However, the mechanics of study cannot be neglected. The study-skills section of the Stanford Achievement Test and the SRA Achievement Series: Work-study Skills both test ability to use table of contents, index, and other sources of information, and to read charts, graphs, tables, and maps. The Tyler-Kimber Study Skills Test covers the same ground on the high school and junior college levels.

Investigations [10, 34] have shown that a majority of superior college students report using certain approved study methods such as studying assignment immediately; making a preliminary survey of headings and summary; and nearly always using tables, charts, and graphs, etc. However, none of the students used all the methods recommended. One may conclude either that other methods may be as effective as those generally recommended, or that many superior students could attain greater scholastic achievement with less expenditure of time if they used higher-level work skills [10, p. 185].

Results of the use of study-habit inventories are conflicting. Carter [7] found that the mechanics of study procedures, as indicated by the responses of 174 high school sophomores on a self-appraisal inventory, are positively related to school achievement. Probation students reported a smaller percentage of approved study methods than did a group of superior students in the same school [19].

Brown and Holtzman [6] obtained a correlation of around .50 between scores on the Survey of Study Habits and Attitudes and first-semester college achievement. He recommended this inventory as an aid in counseling students. However, when used in the Cornell reading-improvement program, this same inventory was found to be of no use as an evaluative device or as an instrument for predicting first-term college achievement.

Reading experts [3] have recommended the following formula for the study type of reading in any subject:

SURVEY Q3R

The *survey* involves preliminary thinking about the chapter or article: What is my purpose in reading it? What do I already know about it? If I were the author, what would I say about the subject? Also included is a skimming of the material to orient the reader and give him the opportunity to decide on the reading method to use.

Q refers to questions that might be answered by the selection. These

are questions to which the reader wants the answer or questions which a rapid skimming shows can be answered in the selection.

The first R refers to thoughtful *reading* to answer the questions and get the information wanted.

The second R stands for *review* to check on one's comprehension of the selection.

The third R suggests that the student *recite* what he has gained from the reading in the form in which he will probably use it.

If a student has already developed efficient methods of his own, there is no need to suggest this or any other method. Let well enough alone. There is no one best method. Children and young people often develop unique and effective methods of their own. However, many students are dissatisfied with their study methods. They can be helped to create conditions conducive to study, to recognize barriers to concentration, to become aware of and to appraise the methods they are using, and to improve them.

Conditions Conducive to Study. Study conditions—time and place, developing a positive "learning set," and budgeting time—are usually included in any consideration of study habits.

Adolescents mention four main conditions that affect their studying: physical conditions, personal factors, the subject to be studied, and the way the teacher presents it [34, chaps. 7, 13]. They emphasize privacy and quiet. When they try to study at home, many students are distracted by the baby crying, younger brothers and sisters playing spacemen and bomber pilots, parents nagging, television and radio blaring, visitors popping in. Large families in small houses have no place for children to study without distractions. The majority of students would agree with the one who said, "When I am alone it is much easier to concentrate on homework and as a result I finish it much faster" [34, p. 487].

Personal factors also affect a student's approach to study. Many students are distracted by worries and competing interests. Anyone would agree that it is hard to put his mind on his books when it is a beautiful day to be out-of-doors, when he knows other boys are out having a good game of baseball, when an exciting television show is on, when something disturbing has happened previously, or something exciting is going to happen. One seventeen-year-old girl expressed it this way: "When I'm excited about something or when anything is bothering me emotionally, that is the most hopeless time for me to try to study. Almost nothing gets through" [34, p. 489].

The content of the subject and the kind of assignment likewise make a difference in the way an adolescent studies. Let us face facts: some subjects have little meaning, use, or purpose for the adolescent; some textbooks are just plain dull. Assignments that are too long or poorly

understood evoke initial feelings of discouragement. Since most adolescents like to take initiative and responsibility, they will work on a voluntary project more eagerly than on a required assignment. "When I enjoy the topic I am studying, I can always do my best." "When the subject is interesting, it seems easier." "New angles to the subject make studying easier for me." "I find it easier to study about things that are happening now or have happened within my lifetime" [34, p. 493]. These are good suggestions for teachers who want to invest school subjects with more intrinsic interest.

Since learning takes place in a relationship, it is no wonder that adolescents recognize the importance of the teacher's personality, his enthusiasm for the subject, and friendly relations with teachers and fellow students. One teen-ager associated her lack of satisfaction in school with lack of friends and inability to succeed: "I wasn't interested in school because I had no friends. No one cared whether I came to school or not" [34, p. 496].

Any form of timing sets a standard of prompt attention to the work at hand. The warming-up period is practically eliminated by this timing mind-set. Thus, if a student estimates that it will take an hour to read his history assignment or recognizes that he has only a half-hour to spend on a certain story, he is likely to set to work promptly, concentrate more closely, and select more carefully. An exercise that has proved valuable with graduate students is the following: "Assume that you have only an hour to spend in reading a popular book you have heard mentioned frequently and are eager to read. See how much of value you can get from this short contact." The next week the students reported orally on the books that they had read and what they had got from the reading. Each had selected a different book and each had read selectively, according to the nature of the book. One student, who had read *The Last Puritan,* paid special attention to the philosophy of the chief character; another, who had skimmed through *Gone with the Wind,* obtained a general idea of the plot and remembered some especially dramatic scenes. One student, however, who had not abandoned his initial belief that every word of a book should be read, selected a very small book that he could read in his accustomed way within the set time limit.

Another exercise that students have found valuable is to see how many words they can read in a daily half-hour or hour. (The words may be estimated by multiplying the average number of words in about ten lines by the number of lines per page to get the approximate words per page and then multiplying that figure by the number of pages.) It is enlightening to the student to see the differences in rate of reading different kinds of material. The form Record of Reading has been used successfully for this purpose.

RECORD OF READING

(Thirty-minute periods)   Book or Article:
Purpose of reading the material:

Date	Time of day	Total number of words read	Comprehension score	Reasons for improvement or lack of improvement

Students frequently need to give attention to the budgeting of their total time, as well as to the use of a particular study period. The best way is for them to keep a simple diary record, beginning with the time that they get up in the morning and continuing with each activity through the day until they go to bed. They can then examine this objective record and decide on changes that can reasonably be made in order to provide a better study schedule. Since habit revision is painful and difficult, they need encouragement and specific evidence, in the form of daily records, of their improved use of time. These daily records may take the simple form Diary Record of Daily Activities.

DIARY RECORD OF DAILY ACTIVITIES

Date:

Day: Name:

Hour	Description of Activity	Remarks	Number of Minutes
6 A.M.–			

Students' Evaluation of Their Progress. The importance of a pupil's discovering for himself that he can succeed in reading cannot be over-emphasized. In comparisons with previous performance, a growing list of words learned or a large pack of vocabulary cards mastered, charts or graphs of speed and comprehension scores on comparable exercises, the pupil has objective evidence of his own success. Excerpts from the analysis made by one student show the relative value he placed on different techniques:

Aside from the actual practice in reading, the virtues of this course can be classified as having sprung from two general sources.

In the first place, I found the *Study Type of Reading Exercises* to be extremely beneficial. The time required for each exercise was reduced as the exercises continued. Much of the increase in speed was due to an increasing realization that I could read somewhat faster than I thought I could. I found that by reading somewhat less thoroughly, I could still comprehend to the degree demanded by the end-exercises. Certainly, it is well to realize when to read with utmost thoroughness and when to practice a degree of skimming.

But the actual subject matter in the booklet was of even greater benefit. For example, the entire concept of reading different materials for different purposes, and therefore in different ways, was here brought home so emphatically that already it has influenced my reading habits markedly. The discussions on certain specific skills in reading, such as eye movements, improvement of vocabulary, learning to skim, and organizing the author's thoughts, have proved both interesting and beneficial. I hope to keep the booklet on hand for practical reference.

The second general benefit in the course was in the class activities, including the various tests and exercises, as well as the group discussions, both in the class as a whole and in the smaller groups. The series of tests informed me that I was perhaps not so poor a reader as I had imagined—true, there is much room for improvement. A significant piece of philosophy that permeates the course is the idea that a saturation point in reading skill does not exist for any one person; no matter what his abilities and his deficiencies are, there seems to be a lifetime of potential reading improvement stretching away before him. The discussions on how to get started on a given task of reading or studying were of great value. General hints, such as budgeting study time, securing an appropriate place to study or read, and starting off with a "gusto" have proved beneficial in my own study habits. Also scheduling fifteen minutes a day for general reading appeals to me as being extremely practical.

While there are activities of the course which, to me, seem to have produced no results, I realize that this may be because there has been no attempt to measure them specifically, or because it takes them a longer time to mature. The discussion of and practice in eye movements and the practice in outlining do not at present impress me as having been particularly fruitful; however, I do not deplore the time so spent.

Obviously, a course such as this should be but the beginning of reading improvement, not the end of it. My plans for the continuation of the spirit of the course group themselves largely around the method described as "improving reading by reading." I plan to supplement this with a modicum of reading books about reading, such as Adler's *How to Read a Book*. I hope to plan a reading diet which is sufficiently well balanced to provide a breadth of reading experience and a richness of reading content.

This course has demonstrated that a better attack on this reading problem results in improvement in reading technique which, in turn, will improve the attack—and so on and on in an anything-but-vicious circle.

How-to-study Courses. A survey [8] in thirty-nine colleges of practices in helping students to develop good study techniques showed that all the colleges in the survey provided some kind of help. In 37 per cent of the cases, there was formal instruction in study improvement, usually not as a separate course but as part of an orientation program, etc. In 70 per cent, instruction was a faculty responsibility; each teacher was expected to discuss study problems in his own course. In addition, 70 per cent had study manuals to which students in trouble could refer; six colleges distributed such manuals to all students.

"Best practices" were divided into two types—individual and group approach. Institutions employing the former expressed the greater satisfaction with it. In the individual approach, the following procedures were used:

All new students fill out study skills inventory in the fall in an interview. Freshmen interviews include discussion of study.
Periodic checking on student progress is made and students are referred for guidance when needed.
Guidance center offers services.
Academic probation requires attention to study skills.

In the group approach there are informal group discussions; upperclassmen work with freshmen; lectures, films, and slides on study are included in the orientation program; a remedial program is offered for those falling below a certain minimum level of performance; departmental workshops are concerned with reading and study problems; a noncredit study course is given; and each teacher spends the first class hours in the discussion of study problems.

Despite these programs and procedures, the institutions responding felt that the need had not been met adequately. Entwhistle's review of study-skills courses reported in the literature also found a wide variation in the length, content, and methods of conducting these courses [12]. The length of the courses varied between seven hours and several semesters. The content consisted of study habits and reading skills in various proportions. The methods included lectures, discussions, counseling, supervised study of regular course material, practice in the fundamental skills, and remedial-reading instruction. Some improvement, varying from a slight to a considerable amount, is reported as resulting from study-skills courses [12, p. 250].

Of three methods of teaching a how-to-study course—(1) instructor-centered, with emphasis on intellectual content, lectures, and teacher-directed activities; (2) student-centered, with emphasis on students' feelings and problems, committee work, and student-led discussion; and (3) a combination of (1) and (2) with "instructor-led discussions interspersed with a variety of other techniques"—the eclectic or combined teacher-student approach seemed to be the most highly motivating [21].

There were no significant differences in knowledge of the course between the three groups. In fact, the personality and skill of the instructor, the time of day, and initial attitudes of the students seemed to be more important than the method used.

Although research has not yet given a clear-cut answer to the question of what the method and content of a how-to-study course should be, it has suggested certain important emphases:

The student's desire to enroll in the course is a prerequisite to improvement.

Skillful instruction in reading and study techniques as well as motivation are essential, but various different techniques may be equally effective. The particular methods or techniques of teaching a course are not as important as the skill and the personality of the instructor using them.

A combination of methods, including participation by both teacher and student, practice and instruction, systematic and opportunistic approaches, is likely to be more effective than extremes of any one method.

Students determining their own learning procedures are likely to do better than those taking courses in which the instructor predetermines the study procedures [25].

The many factors involved in effective study should be recognized and integrated [17, 23].

An all-school approach, involving stimulation and evaluation of students' learning methods in each subject is necessary [26].

There seems to be enough evidence of immediate and long-term gains from study-skills courses to warrant further experimentation and use of them [12, p. 250].

CONCLUDING STATEMENT

Reading is always a means to an end. Word recognition skills, vocabulary development, and literal comprehension skills are basic to interpretive and critical reading. Study skills, as usually defined, also create conditions conducive to reading, as broadly interpreted.

Effective reading stems from the desire to learn through reading. It is motivated by the reader's goal and purpose. It is stimulated by interesting and challenging reading material. It contributes to the solution of everyday problems, to the enhancement of personality, and to the enrichment of life.

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CHAPTER 18

Reading Interests, Materials, and Equipment

Reading materials and equipment are of central importance in the reading program. Basic readers can be used to provide a common core and continuity of reading experience year by year. Workbooks may reinforce essential skills and other additional practice where needed. Textbooks in each of the content fields provide a framework and sequence of knowledge which make supplementary reading more meaningful and easy to remember. Models and samples, pictures, slide films, and motion pictures, as well as conversations, excursions, and other firsthand experiences may supplement and clarify a person's reading. At all age levels suitable reading material helps children and young people to develop skill in reading, and contributes to their personal and social development. Reading "opens the doors to the thousands of useful and interesting things which will keep the child learning all his life" [15, p. 143].

On the other hand, unsuitable material may cause or intensify reading problems. When the books given students are too difficult, they may confirm their impressions of the drudgery of reading and of themselves as failures. When the books are obviously childish, the poor reader is embarrassed to be reading them. When the books are dull and remote from students' interests, they offer no immediate reward for reading; when they present an untrue or sordid view of life, their influence on children and young people is degrading. To provide suitable reading

materials and equipment, we need to know the answers to the following questions:

What are the general interests and the reading interests of children and adolescents? How can they be developed?

What makes a book readable?

What reading materials are suitable for different ages and different levels of reading ability?

How can a teacher obtain and use reading material to meet the needs of all?

What materials and equipment other than printed books, pamphlets, and magazines are needed in a program for the improvement of reading?

GENERAL INTERESTS

As we observe reluctant readers among teen-agers, their main interests seem to be automobiles; television, radio, and movies; spectator sports; part-time work; and club activities.

Witty's annual surveys of the relation of television to reading [53, 54] show clearly that the amount of time spent by children and young people in televiewing rivals the hours they spend in school. The small amount of time spent by younger pupils in reading—about an hour each day—is in sharp contrast with the three hours daily devoted to television. High school students, on the average, spend less time in televiewing than either elementary school children or parents. Individual differences range from addiction to television to complete rejection. Despite the large amount of time spent with television, its effect on reading is not clear. Little consistent relationship has been found between the time spent in televiewing and achievement in reading or time spent in reading. However, several studies have shown that low achievers spend more than twice as much time viewing television as do A students in grades 10 to 12 [27]. Of course, we cannot conclude that television is the cause of the low marks. Both the low marks and excessive televiewing may stem from underlying conditions, such as a lack of a specific goal or purpose.

To many children television seems beneficial; some say it helps them in school. Parents, however, have complained that television interferes with children's homework. The detrimental effects are frequently recognized by educators. Only a small percentage of the programs are informative; the large proportion, depicting horror, violence, crime, and sex, cannot fail to have subtle and pervasive effects on the minds and morals of children and young people, lowering their values, making them insensitive to brutality and crime. One preschool child, when asked what the program he had been viewing was about, replied, "Just murder." Another child, when an adult told him that her brother had died, asked, "Who killed him?"

Television has potential value for reading. It catches current history in

excerpts from books divided into pairs, one characterized by precision of expression, the other by ambiguity. By their preference for these items, students are ranked on three levels of reading maturity.

Any of these methods will yield a rich reward of information for a small investment of time. The validity of the responses depends upon capturing the students' interest and cooperation, and is increased by anonymity.

Results of Studies of Reading Interest. Although students' interests vary somewhat with the geographical location, characteristics of the students, kinds of reading material available, and prevalent methods of teaching, certain trends seem to be quite general. Fiction is generally preferred to nonfiction. Comics, action, adventure, suspense, animal stories, mystery, humor, biography, and "stories about teen-agers like ourselves" are top classifications for both boys and girls.

From junior to senior high school there is an increasing interest in specialized subjects and other nonfiction and in romance, especially for girls. Girls, in general, read more fiction, poetry, books about music, and stories about home and family life than do boys. Boys read more books of strenuous adventure, science, biographies, and stories and accounts of sports and hobbies than do girls. They also are reported to read the newspapers more than girls do. Junior high school boys mentioned as their favorite works *Call of the Wild, Emperor Jones, The Highwayman, Lassie Come Home,* Lincoln's *Gettysburg Address, Night of the Storm, Silver Chief, Dog of the North,* The Tarzan Series, *Thunderhead, Tom Sawyer* and *Huckleberry Finn,* and *Treasure Island.*

One of the most extensive studies of reading interests indicated that teachers definitely influence their students' choice of books but not their choice of periodical literature read outside of school. Favorite magazines for both boys and girls in junior high school were *American Magazine, Good Housekeeping, Life, National Geographic Magazine, Reader's Digest,* and *The Saturday Evening Post.* Girls read *American Girl, Calling All Girls, Miss America,* and *Senior Prom.* Boys read *Boys' Life, Open Road for Boys, Popular Mechanics Magazine,* and *Popular Science.* Interest in these magazines seems to have changed little during the last twenty-five years. Both boys and girls reported reading mostly the front page of the newspaper, the comic section, sports, and television, radio, movie, and theater news. Books about prehistoric times and modern space travel are high in popularity.

Students like books written in a simple, free and easy style and natural language pattern; books that have little description and tell the story in a swift, straightforward manner. They like plenty of humor, action, and suspense. These same criteria seem to apply to junior high school pupils' choice of poetry as well as prose. They dislike books that are over their heads, monotonous, too wordy, have a slow, plodding plot, or beat around the bush. Junior high school youngsters also complain about "books that

are mushy"—too sentimental. But they respond to the warmth of feeling in great stories that stir their sympathies and satisfy their sense of justice. They want their stories to ring true. They do not like books that have no young persons as characters or stories that seem to them to have little or no value.

The peak of voluntary reading is at about age thirteen, decreasing sharply from the seventh to the twelfth grade because of increased homework, extraclass activities, and part-time work. College students attribute their limited voluntary reading to heavy assignments, which seem to be defeating the development of worthwhile habits of leisure reading during college years.

Reading about vocations may begin early. Third-grade readers contain a considerable amount of occupational information in unorganized form [9]. Older students, however, read few books on vocations, possibly because vocational information has not yet been presented in readable form.

The fact that reading interests seem to be established early highlights the importance of cultivating reading interests and tastes during the school years. Students' preferences for certain types of reading material are influenced by their previous experiences and home backgrounds, the teacher's preferences, his method of teaching, curricular emphases, and the books and magazines available to them. We should make the most of children's interests [23].

Satisfactions Gained from Reading. Much deeper analysis of reading interests is obviously needed. We need to know more about the many personal factors involved in an individual's choice of a book. We need to know—and the student needs to be aware of—the various kinds of satisfactions which a reader may get from different kinds of reading. Harold B. Dunkel [14], believing that people read "because of the satisfactions or values which they obtain," prepared an inventory of 150 statements of satisfactions which could be derived from reading fiction. The items fall under these categories: relaxation and pastime; escape; associational values; technical-critical values; and information or ideas about intimate personal relations, sociocivic matters, philosophy of life and religion. This inventory, used with college students, has shown a wide variety of patterns of satisfaction. It reveals to the individual student the potential satisfactions he may be missing by neglect of good literature. We should not let students bog down permanently on initially low levels of preference. Interests can be built.

WAYS OF AROUSING AND DEVELOPING INTEREST IN READING

Reading becomes important when it is related to one's own life. True-to-life fiction has this appeal. If students do not recognize the relation of the story to their lives, the teacher may raise questions: "Could the events

in the story have happened at that time? Could they happen now? Would people really behave as they do in the story? Were the characters 'all good' or 'all bad'? Is that the way people are? Give evidence for your opinion from the story. Was the struggle here described between two persons? between people and the forces of nature? between a person and an ideal?"

Accent on Enjoyment. A special class in reading for enjoyment may be offered as an elective, or a book club may be formed within a regular English class. This kind of reading experience not only serves as a means of introducing students to new and better books but also provides time for recreational reading within the school program—especially valuable for students who do remunerative work after school. In one junior high school there is a reading-seeing-listening room that combines the qualities of browsing room, lounging room, music-appreciation room, and art center. The furniture is comfortable, the lights are pleasant, records of classical music are played at intervals during the day, and a small but well-selected group of pictures, frequently changed, is on display. The students enjoy this room and like to spend their time there; of their own volition they read some of the good books available. Colleges might well include a room of this kind in their dormitories and student-union buildings.

Book clubs have social and voluntary features that appeal to many students. The meetings are devoted to discussions of books, to exploration of new books, to dramatized reading of short plays, and to special projects such as setting up exhibits, giving an assembly program on books, and raising money to buy new books.

Using Various Devices. Interest in reading available books may be stimulated by many devices. Assembly programs may introduce new or especially valuable books through book "sales talks," dramatizations of scenes from books, lively panel discussions, or a "guess-who" program presenting characters from books. A book fair [17] encourages students to show initiative and ingenuity in presenting to others books which they have especially enjoyed. A permanent bulletin board is useful for displaying reviews of books and the gay jackets of new books. One teacher made effective use of the bulletin board by pasting up pictures about current events, sports, important persons, and other topics and by placing books and magazine articles relating to the same topics on a table below. This material could be read in free periods or checked out to be read in study hall or at home. Book reviews written by students for the school paper and sometimes for the local newspaper disseminate students' recommendations for reading and publicize worthwhile new books. One ninth-grade group made bibliography cards with headings such as "Books about Real Girls," "These Will Make You Chuckle," "Adventure Ahead," and "Mystery Stories." The cards had three columns giving author, title, and

a brief comment signed by the student who wrote it. These cards were conveniently placed and students added to them of their own volition whenever they read a book that they particularly liked.

Reading interests may be stimulated and broadened by activities that open up new fields of interest to students. Jensen [22] described a six-weeks' project in reading books by authors of many nationalities around definite topics such as "A Comparison of Home Life in Different Countries," "Attitude toward Women in Different Countries," "The Different Ways Nations Show Their Sense of Humor."

Books may be advertised by posters. This device interests both the art student, who reads books in order to select a subject for his poster, and the students who see the posters. Students in any class may be encouraged to design and draw jackets for the books that they have read, illustrating some feature of a book that will make others want to read it.

Interest may be aroused by asking students, especially groups of retarded readers, to record all the "environmental reading" they do—street names, signs, menus, advertisements, and the like. If they also make a quiz based on the material that stumped them, the class will discover many unrecognized reading needs.

High school students who conduct a community survey of reading practices and resources become interested in the availability of reading material and in the quality of the books and magazines read by people in their community. They are often shocked by the poor reading habits they find, and their concern is reflected in an improvement in their own reading interests and tastes.

Developing Interest Where No Interest Was. Perhaps the emphasis on discovering students' interests has led to the conclusion that students should not be expected to read anything that is not initially interesting to them. That is unrealistic. Everyone has to read and comprehend some books and articles he does not particularly like. Fortunately, there are ways of investing a book with interest. The student may see how reading the book contributes to a larger goal. He may imagine himself as the author and ask, "What would I say if I were writing this book?" Then he reads to see how many of the author's ideas he had thought of and which ideas had not occurred to him. Discussing the topic before reading the book or reviewing what he already knows about the subject, he may find gaps in his knowledge which the book may fill and questions it may answer. Sometimes reading a popular book paves the way for understanding a more advanced book. Friends with different interests help, too; a student may catch the interests of another and want to learn more through reading.

Books should be interesting. Interest evokes effort, and aids comprehension and memory. Students themselves say that if a book is interesting they read it eagerly and with enjoyment. Their interest enlists their atten-

tion and impels them to read fast and thoroughly. Because they are concentrating well, they comprehend better; they learn and remember what they read. The whole process is satisfying. In their own words: "If I'm interested, I'll concentrate so deeply that it would take an atom bomb to divert my attention." "If I'm interested, I'm much more susceptible to knowledge." "When I read a book that isn't interesting, I become very bored and start daydreaming, or even sleeping."

The reading interests of high school students can be stimulated by keeping some kind of cumulative reading record, if the idea is properly introduced to them. In a discussion they will probably admit that it is fun to see how many books they have read during the high school years and that the record shows gaps in content areas, introduces books other than fiction, provides for progression in quality and difficulty, and suggests sequences in their field of major interest. One student's record may be a means of interesting other students in books that he has liked.

The students may either work out their own forms or select a form that has already been developed. A cumulative reading record provides space for many books and calls for a brief comment and a rating on a 4-point scale: "One of the best books I have ever read; a good book, I like it; not so very interesting; I don't like it."

A more detailed analytical type of record is suggested by Witty:

Name _____ Div. _____ Date _____
Assignment _____ Book _____
Story _____ Pages _____
Did you like this story? Write yes or no _____
If you did not like this story, tell why you did not like it. _____
Put a ring around the words that tell what you think about the story.

    Vocabulary too   Vocabulary too   Story hard
        difficult   easy   to understand

Name the main characters in the story. _____
Write the main facts of the story. _____
List the difficult words in the story. _____

SELECTING THE READING MATERIALS

The number and quality of books read depend to a large extent on their accessibility. This puts responsibility on parents, teachers, librarians, and residence-hall directors for making easily available the kinds of books which children and young people need. To select books wisely, we need to have knowledge of the students' reading needs, interests, and abilities and knowledge of books and their approximate levels of difficulty. The teacher needs to learn how to scan a book and judge its readability and interest appeal quickly.

Understanding the Students. The teacher may learn much about his students' reading interests through observing them while they are reading. Helen Carpenter reported her observation of a group of sixth-grade children who had IQs between 75 and 90 while they were reading two short passages. The first story was about ghosts. When the pupils began to read, their faces were noncommittal but as they proceeded, their expressions became animated and eager. No one raised his hand for help on vocabulary, although there were words that the teacher knew were unfamiliar—*rooted, stunned, evil, whimper, stuttered.* The pupils seemed to be able to get the meaning of these words from the context. After reading the story they were eager to discuss who the ghost was. Each pupil who gave an opinion read the part of the story that supported his point of view. Throughout the period they made spontaneous comments: "This is a good story." "When do we get the next chapter?" "May we keep this story?" The most frequently mentioned reasons for liking the story were these: "It is interesting." "It is exciting." "Spooky." "Fun to read." "Could happen."

Quite different was the response to another selection, "Cultured Pearls," given to the same pupils to read a week later. They remembered the ghost story and approached the reading period with eagerness. Their interest, however, soon died down. They began to raise questions about the meaning of the title and of some of the hardest words—*scientist, oyster, artificial, cultivated, experiment.* They were not able to get the meaning of these words from the context, and their attempts to illustrate parts of the story showed lack of comprehension. The pupils gave some explanations for liking the story: "Won't throw away pearls now when eating oysters." "Tells you things." "New idea." But there were no such spontaneous expressions of interest as there had been about the previous story. The following week, instead of asking, "Do we have another story?" they asked, "Is it another test again?"

Observation of the pupils while they were reading and their spontaneous comments about the two selections left no doubt as to which story was interesting to the group and well within their ability to comprehend. This procedure is suggested as a method of discovering reading material that makes the strongest appeal to different groups of adolescents, and the difficulties that they encounter. Parents as well as teachers should take time to listen to children, explore reading experiences with them, and share their interests. The adult can suggest, but it is the youngster who makes the choice of books he will read.

Using Book Lists. In selecting books the librarian is an invaluable asset. He knows books, keeps in touch with new issues, and is familiar with book lists, including everything from comics to classics. He uses such sources as the following:

Arbuthnot, May Hill: *Children and Books,* rev. ed., Scott, Foresman and Company, Chicago, 1957.

Basic Book Collection for Junior High Schools, American Library Association, Chicago, 1960.

Bibliography of Books for Children, Association for Childhood Education International, Washington, 1958.

Booklists from the Child Study Association of America, New York.

Books for the Teen Age, annual list of the New York Public Library, New York.

Books of the Traveling High School Science Library, 3d ed., American Association for the Advancement of Science, Washington, 1957.

Children's Books around the World, American Association of University Women, Washington.

Children's Books for Fifty Cents or Less, Association for Childhood Education International, Washington, n.d. *Children's Books for Seventy-five Cents or Less,* Association for Childhood Education International, Washington, n.d.

Eakin, Mary K.: *Good Books for Children,* University of Chicago Press, Chicago, 1959.

Eaton, Anne: *Treasure for the Taking,* rev. ed., The Viking Press, Inc., New York, 1957.

Fenner, Phyllis R.: *Something Shared: Children and Books,* The John Day Company, Inc., New York, 1959.

Fraiberg, Selma H.: *The Magic Years,* Charles Scribner's Sons, New York, 1959.

Larrick, Nancy: *A Parent's Guide to Children's Reading: How Parents Can Help,* Doubleday & Company, Inc., New York, 1958.

Larrick, Nancy: *A Teacher's Guide to Children's Books,* Charles E. Merrill Company, New York, 1960.

The Wonderful World of Books, edited by A. Stefferud, Houghton Mifflin Company, Boston, n.d.

A number of bibliographies and anthologies bring together literature relating to character development and adolescent problems or tasks.

Brooks, Alice R.: "Integrating Books and Reading with Adolescent Tasks," *School Review,* vol. 58, pp. 211–219, April, 1950.

Cadigan, Robert J. (ed.): *September to June: Stories of School and College Life,* Appleton-Century-Crofts, Inc., New York, 1942.

De Boer, John J.: *Reading for Living,* State Department of Public Instruction Circular A, no. 51, Springfield, Ill., 1953.

Irrig, M.: "Developing Character through Reading," *Wilson Library Bulletin,* vol. 33, pp. 571–573, April, 1959.

Kircher, Clara J. (comp.): *Character Formation through Books,* 3d ed. (rev. and enlarged), The Catholic University of America Press, Washington, 1952.

La Plante, Effie, and Thelma O'Donnell: "Developmental Values through Library Books," *Chicago Schools Journal,* vol. 31, March–April, 1950, Supplement.

Life Adjustment Booklets for teen-agers and Junior Life Adjustment Booklets for younger boys and girls, Science Research Associates, Inc., Chicago.

McGann, Mary E.: "Dramatic Dialogues for the Simultaneous Treatment of Reading and Personality Problems," *Journal of Educational Psychology,* vol. 38, pp. 96–104, February, 1947.

Bibliographies, prepared for adult beginners and foreign-born adults, are also of great value for the adolescent nonreader.

D'Amico, Louis A., Nicholas A. Fattu, and Lloyd S. Standlee: *An Annotated Bibliography of Adult Literacy Training Materials,* Bulletin of the Institute of Educational Research of Indiana University, vol. 1, 1954.

Staff of the Readers' Bureau, Pauline J. Fihe (chm.): *Books for Adult Beginners,* Grades I to VII, rev. ed., American Library Association, Chicago, 1946.

A list of the easiest books for beginners with adult interests would include the following titles:

Barton, S., and M. C. Moore: *Highway Signs,* Book I, Highway Safety Series, State Department of Public Instruction, Raleigh, N.C., 1939.

Boynton, P. W.: *Six Ways to Get a Job,* Harper & Brothers, New York, 1945.

Bright, E. L., and E. C. Mitchell: *Making a Good Living,* Reader II, Home and Family Life Series, Educator's Washington Dispatch, New London, Conn., 1949.

Dale, Edgar: *Stories for Today,* United States Armed Forces Institute, Madison, Wis., 1953.

Dale, Edgar: *Stories Worth Knowing,* United States Armed Forces Institute, Madison, Wis., 1954.

Gardiner, G. L.: *How You Can Get a Job,* Harper & Brothers, New York, 1945.

Guyton, M. L., and M. E. Kielty: *From Words to Stories,* Noble & Noble, Publishers, Inc., New York, 1951.

Herdegen, J. W.: *How to Get the Job You Want,* Essential Books, New York, 1945.

Kasper, S. H. (ed.): *Job Guide: A Handbook of Official Information about Employment Opportunities in Leading Industries,* Public Affairs Press, Washington, 1945.

Lasher, W. K., and E. A. Richards: *How You Can Get a Better Job,* American Technical Society, Chicago, 1945.

Lynn, K. D., and H. A. Whiting: *Everday Living,* Allen, James and Company, Atlanta, Ga., 1949.

Macavoy, C. H.: *English in Pictures,* Fort Orange Press, Albany, N.Y., 1937.

Marine Corps Institute: *The Marine Corps Reader,* Book I, Washington, 1952.

Marine Corps Institute: *Practice Book to Accompany Marine Corps Reader,* Book I, Washington, 1952.

National Citizenship Education Program: *Literacy Reader, the Day Family,* Book I, Government Printing Office, Washington, 1943.

Navy Life Reader Book 1 (restricted), Bureau of Naval Personnel Training, Standards and Curriculum Division, NAVPERS 15180, 1945.

Reader's Digest: *Adult Education Reader,* Pleasantville, New York, 1954.

Richards, I. A., and C. M. Gibson: *English through Pictures,* Pocket Books, Inc., New York, 1952.

Richards, I. A., and C. M. Gibson: *First Steps in Reading English,* Pocket Books, Inc., New York, 1957.

Vocational Guidance Research: *500 Postwar Jobs for Men,* Doubleday & Company, Inc., New York, 1945.

Bibliographies for gifted and for retarded readers and slow learners are given in Chapter 11.

Selecting Textbooks and Books to Improve Reading. A textbook is useful in giving a class a common background, a gestalt or framework against which reference reading can be done more effectively. If the span of reading ability in a class is great, it is better to have many reference books of varied difficulty and differentiated assignments rather than con-

centrating on the mastery of a single textbook. Before making a choice of textbook the teacher might well consider the book's logical organization; its appeal to students' real-life interests; its clues to organization and important ideas such as headings, introduction, guiding questions; and its vocabulary aids. He should also study its readability—simple words, clear, short sentences, well-constructed paragraphs, and well-illustrated main ideas. He should also ask, "Does the book give the student a sense of direction but not 'save him the journey'?" [19, p. 109]. There is urgent need for more books that meet these criteria.

The mere mention of a textbook raises the old controversy of extensive versus intensive reading. Ruskin emphasized the importance of intensive reading when he wrote, "You might read all the books in the British museum . . . and remain an utterly 'illiterate,' uneducated person; but . . . if you read ten pages of a good book . . . with real accuracy—you are forevermore in some measure an educated person." Actually it is not a question of either-or—both kinds of reading are useful and necessary; one complements the other. Each kind of reading serves special purposes and should be used when appropriate. There is evidence that the enriched program of extensive reading results in more competent readers than one limited to a basic reader and workbook.

There are series of reading texts which reading teachers should examine to select the books most appropriate to their classes. Some of these are listed in Appendix C and in *Gateways to Readable Books* [48]. Some give both practice and instruction in reading. Some are used as an extension of a basic series, such as Reading Essential Series by U. W. Leavell and others. Others give practice in reading for meaning, such as W. S. Guiler and J. H. Coleman, *Reading for Meaning*, published by J. B. Lippincott Company, for grades 4 to 8.

Another type of book emphasizes reading for enjoyment or information. Stephen W. Meader's *T-model Tommy*, published by Harcourt, Brace & World, Inc., has long been popular with young teen-age retarded readers. The Childhood of Famous Americans Series, by August Stevenson and others, and F. W. Chandler's Cowboy Sam Series are some examples of collections of stories. Edward W. Dolch's Basic Vocabulary Series, published by the Garrard Press, though written with only 315 basic words, includes stories with interest level as high as grade 9.

Career novels are numerous and appeal to adolescents eager to explore the world of work. Several examples of these are—

Floherty, John J.: *Search and Rescue at Sea,* J. B. Lippincott Company, Philadelphia, 1953.
Hall, Marjory: *Sarah Lee's Silver Spoon,* William Sloane Associates, New York, 1952.
Hill, Margaret: *Goal in the Sky,* Little, Brown & Company, Boston, 1953.

Condoning the Comics. Parents as well as teachers want to know what to do about the comics. How widespread is the reading of comic books?

What kind of comics do youngsters read? Why do the comic books make such a strong appeal? What are the relations between the reading of comic books and general reading habits, reading ability, school achievement, and problem behavior?

There is no doubt that the reading of comics is widespread. Bright as well as dull children, good readers as well as poor, children from high as well as low socioeconomic levels read them. Comic books are ubiquitous [44]. Children read, on the average, five or six comic books a week, sometimes nine or more. The time they spend reading comics ranges from less than half an hour to more than five hours a week. Most children, however, tend to outgrow to some extent their preadolescent intensity of interest in the comics when they get to senior high school.

The supply of comic books is inexhaustible. Millions of copies are sold each month and, through exchange systems worked out by the youngsters, each copy may have several readers. They vary widely in quality. They cover a range from the most violent cruelty and horrors, through the harmless animal cartoons, to comics dealing quite effectively with historical or current events, such as M. C. Gaines's *The Minute Man Answers the Call*.[1] The Cincinnati Committee on the Evaluation of Comic Books found one-third of the 2,117 they examined to be "unobjectionable." Some try to build attitudes of fair play, tolerance, and kindness. A few are high in art quality and patriotic in appeal. Some are really comical. Any discussion of the effect of the comics on an individual child or on groups of children should be based on a knowledge of the kind of comics they read. The quality of comics read varies with individuals and with communities.

Comic books make many appeals. They are cheap; children can buy them. They are easy to read. They embody interest factors preferred by children of these ages—action, lively contemporary adventure, fantastic adventure, humor, suspense. Comic books have all these appeals in more concentrated form than books; they are not diluted with descriptions or wordiness. In addition to these basic appeals the comics give satisfaction to the retarded reader because he can get meaning from them. Even if he does not know the words, he can "read" the pictures. Incidentally, if he does read the words he can acquire a basic vocabulary plus a few more difficult words from the comic books alone [51]. A different but nonetheless potent appeal is that "everybody's doing it"; it seems socially necessary to know about the current doings of the popular comic characters.

For some youngsters in early adolescence, reading the comics may be a way of asserting independence from adult domination. In other cases, the comics may serve various personal needs—as harmless outlets for aggression, as a means of escape from reality. In view of their popularity

[1] All-American Comics, Inc.

it seems that the comics must meet some real and vital need of children and young teen-agers [5].

Little evidence has been obtained on the relation between the reading of comics and general reading habits and school achievement. It would seem more desirable for retarded readers to read the better type of comics —not the weird, horror, or sex comics—than not to read at all. The policy of starting with the comics, if that is where the youngsters are, is generally recommended. If they did not read comics, it is doubtful whether they would use their time to read a better type of material. The detrimental effect on reading habits results when the comics become a central, persistent interest instead of a passing stage and part of a well-balanced reading program. Excessive reading of comics is likely to be part of a total low school-achievement pattern.

The psychological effects of reading the comics likewise vary with the individual and the group. Psychologists and psychiatrists differ in their opinions of the probable effects. Some think the comics provide "harmless outlets for children's aggressions." Bender [4] emphasized the constructive aspect of fantasy in the comics in helping the child to explore reality and solve his reality problems. Others believe that "today's comic books may stimulate unhealthy sexual attitudes and distort human values. All agree that for a great many children a steady 'horror' diet can be upsetting" [44, p. 1]. As to whether comics cause delinquency—although some juvenile delinquents claim to have got ideas for their crimes from the comics, there is not adequate evidence against the comics on this score. "Most causes of delinquency are far more deeply rooted" [44, p. 1]. It is probable that children and young people tend to extract from any kind of reading material what is of value to them at the time; they may pass over much of the content that adults worry about.

In view of these facts what should be our policy? We should not make the mistake of condemning or confiscating comic books. This only arouses the youngster's antagonism against parents and teachers and drives comic-book reading underground. It is far better to accept the comics and extract whatever values they may have. A positive approach is best. We can help youngsters to appraise the comics they read and select the best. By providing books that make the same appeals, we can help children make the transition to better reading. The pupils in one class shifted their interest from comics to Short Biographies of Famous Men, supplied without cost by the John Hancock Insurance Company. By encouraging constructive pastimes that will compete with the comics in interest value, we can gradually crowd out the comics and help children have a better-balanced reading program.

Condensing the Classics. There are two schools of thought about the use of simplified classics. One considers the classics inviolable; the other

wants to make some of the ideas and inspiration to be found in the "great books" available to even the poor readers.

There are three possible courses of action: to rule out those classics that contain formidable language barriers; to simplify them; to provide systematic instruction aimed to help students master some of their difficulties. A combination of these approaches would seem to be the best solution.

Those who oppose simplification of the classics maintain that the rewritten classic is not the same story—it is only the bare bones. It loses the author's distinctive quality of style which reveals his attitude toward life; it destroys the "harmony of thought and style that has been so happily combined to make the story great." Is it not better to wait until the student has sufficient skill to read the classic in its original form?

Those who defend the simplified classics claim that some students can never understand the great stories in their original form because of their obsolete and otherwise difficult words and sentence structure and their slow-moving descriptive content. Therefore, it is better to give students some acquaintance with the great books than to let them miss entirely these insights, pleasures, inspirations, and the social value of sharing a common experience.

This controversy is partly due to differences in the quality of the simplified versions. Some are stilted, mechanical, uninspiring. Others retain some of the flavor and style of the original while eliminating the most serious stumbling blocks. Anderson pointed out that "for generations, even centuries, we have been willing to remove the language barriers from the Bible and to present its message to new generations in a language that can be understood" [3, p. 217; copyright 1945]. Similar barriers have not been removed from other great works of literature.

Instruction to help students overcome some of the difficulties they meet in great literature may take several forms. Selected radio and television programs and recordings of great books may be used to give students parallel experiences of responding emotionally to spoken language. The instructor may read aloud parts of a book or play to familiarize students with the vocabulary and sentence structure. Students may read descriptive passages aloud for other students to respond to with imagination. They may prepare dramatizations or readings of significant sections. The class may analyze or even diagram the grammatical structure of some of the involved sentences. Understanding certain classics would require study of "the nature, purpose, and use of metaphor," and a "sensitivity to the author's use of satire and irony" [3].

Several publishers have prepared a number of simplified classics. Scott, Foresman's *Six Great Stories, Lorna Doone, Captains Courageous,* and others are skillfully simplified. The Globe Book Company offers many

adapted classics such as *A Tale of Two Cities, Jane Eyre,* and *Les Misérables,* some of which are illustrated with pictures taken from movies based on the books. Simplified versions of some modern best sellers have recently been added to the collection. Examples of other adapted classics in series form are—

The Classics for Enjoyment Series, Laidlaw Brothers, Inc., New York.
Everyreader Series, Webster Publishing Company, St. Louis, Mo.
Famous Story Series, Benj. H. Sanborn & Co., Chicago.
The Treasure Book Series, The Steck Company, Austin, Tex.

Those who object to simplifying the classics nevertheless recognize that if students are forced to read books beyond their comprehension they may acquire a strong and permanent distaste for all literature. Consequently, they are in favor of original easy reading such as the American Adventure Series, published by Wheeler Publishing Company; The Childhood of Famous Americans Series, The Bobbs-Merrill Company Inc., and The Real People Series, Row, Peterson & Company; or simplified modern stories that have not yet achieved classic status, such as *Teen-age Tales,* published by D. C. Heath and Company.

Perhaps we are accepting too wholeheartedly present trends as the wave of the future. Do these trends arise from human needs, or have children and young people become subtly conditioned to the comic–book–television way of life by a small number of persons promoting these profitable avenues of communication? Is the modern craving for excitement and suspense to be fostered to the exclusion of scenes of quietude and kindliness portrayed in *The Wind and the Willows?* Instead of catering to these modern trends, should we not teach children and young people how to enjoy classics appropriate for them? Good teachers can. They can provide a progression of vicarious experiences starting with the values of the adolescent culture as presented in the best of the junior novels, such as Maureen Daly's *Seventeenth Summer,* and moving on to classics such as *Wuthering Heights* or *Jane Eyre.*

Multiplying Magazines. It is a good investment to subscribe to selected teen-age and popular adult magazines. A few of these are listed below:

American Girl	*Photoplay*
Astounding Science Fiction	*Popular Mechanics Magazine*
Boys' Life	*Reader's Digest*
Junior Natural History	*Scholastic Magazines*
My Weekly Reader	*Seventeen*
National Geographic Magazine	

By providing good reading, teachers and parents can best crowd out the influx of demoralizing magazines and paper-bound books now available in drugstores and on newsstands.

Children's book clubs have skyrocketed in popularity. There are clubs for children from four years old to seniors in high school: Catholic Chil-

dren's Book Club, Junior Literary Guild, Arrow Book Club, Parents' Magazine Book Club for Children, Weekly Reader Children's Book Club, Young Readers of America, and Teen-age Book Club.

Providing Practice Exercises. Many teachers depend too much on workbooks. Their "reading program" consists in having the whole class spend the period doing the exercises in a single set of workbooks. The inadequacy of such a procedure is obvious. A single workbook cannot meet the diverse needs of all the pupils. If workbooks are to be used, the teacher should get a variety and select the most appropriate for each pupil; better still select exercises from different workbooks as they are needed by individual pupils. Other objections to the exclusive use of workbooks are that they neglect the fun aspect of reading, give no education in the choice of books for leisure reading, and emphasize reading as an end in itself. There are now on the market a number of workbooks which may be illustrated by the titles in Appendix C.

Including Games to Lighten Drill on Skills. Many reading games have been devised for elementary and junior high school pupils. Since the game interest is keen at these ages, games provide a happy way of giving necessary drill. Many word games may be played by two or more pupils. One game is played like checkers. A word is clearly printed on each square. The players can move ahead only if they can read the word. A third child who is a more advanced reader serves as the referee. Word games give opportunity for enjoyable and varied repetition which fixes basic vocabulary in children's minds. Games in which everyone can score and competition is minimized are best.

Teachers and pupils sometimes devise their own games. Others may be purchased, as, for example, the Aids to Reading sets.[2]

Determining Difficulty. "The strange thing is that when a child is given reading books beyond his reading ability, he learns very little from them. . . . We might state the principle as 'give a child a weight he can lift, and he will be able to lift more; give him a weight he cannot lift, and he gets no stronger' " [13, pp. 158–159].

We say glibly, "Provide reading material suited to the individual, which will challenge but not frustrate him." To do this it is necessary to know the level of difficulty of the books and magazines we recommend. Most bibliographies indicate the interest rather than the difficulty level of the books listed. Some bibliographies, such as *Gateways to Readable Books* [48], include with the annotation a grade-level appraisal of difficulty. The elementary school bibliography of the National Council of Teachers of English, *Adventuring with Books* [8], indicates with a special symbol a book which is easy for the grade level to which it usually appeals. Publishers' lists are becoming increasingly helpful in this respect.

One method of determining the difficulty of materials is to use a

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[2] Garrard Press, Champaign, Ill.

readability formula such as the Dale-Chall [11] or the Lorge [24] on sample passages from the material. These formulas measure primarily the structural difficulties of material. They are a useful means of checking and supplementing teachers' judgments. After rating a number of books by means of one of the formulas, a teacher becomes quite expert in quickly appraising the difficulty of a book.

Certain cautions are suggested in using the formulas as a guide to writing and to book selection. We must remember that all elements of readability are not included in the formulas. The many different meanings which the same word can have or the complexity of a thought that can be expressed in very simple words or the difficulties that poor organization of simple material can create for the reader—these are not given weight in the difficulty ratings by the formulas. Nor is there sufficient recognition of the influence of interest on readability. So we have to add to or subtract, according to our knowledge of these other elements in the book, from the grade level assigned by the formula. Another objection to the formulas is the length of time it takes to estimate the difficulty level of a book by means of them.

The ultimate test is the students' comprehension of the material, regardless of its readability index. An individual can get meaning from material considerably above his reading-difficulty level as measured by standardized tests, if he has a keen interest in or need for the information, or a strong desire to find out what happened next.

WAYS OF PROVIDING SUITABLE READING MATERIAL

"How can teachers get the materials they need? Will groups in the community raise money to buy books that the schools fail to supply?"

Reading material needed would include basic and supplementary books; magazines and recreational reading; reference materials such as maps, atlases, encyclopedias, thesauruses; pamphlets, classified clippings, and student-made or teacher-made materials.

Inexpensive Reading Material. Many valuable pamphlets are supplied without charge to schools by the Metropolitan Life Insurance Company, the National Tuberculosis Association, the National Dairy Council, other service organizations, government agencies, and business and industrial concerns. A few examples of this kind of material will suggest their sources and their uses: *Edison and Electricity,* General Electric; *Guide for Good Grooming Program,* Bristol-Myers Company; *Hair Beauty,* Toni; *Rayon,* Dupont; *Steel Serves the Farmer,* American Iron and Steel Institute; *Teen-age Pamphlets,* Ladies' Home Journal; *We Drivers,* General Motors.

The paper-bound books which have had such an enormous sale make it possible for many people to buy books conveniently and cheaply. Of

course, many of these are mysteries, westerns, and sexy stories, but the growing popularity of good literature and nonfiction is encouraging. There is now available an abundance of paper-bound books on science, philosophy, religion, the arts, economics, anthropology, art and music appreciation, and the classics [16]. Among the inexpensive editions of the classics and some of the best modern works are Harper's Modern Classics, Doubleday's Anchor Books, Regnery's and Rinehart's paper-bound books, Pocket Books' Discovery Series, Perma Books' *New Voices: American Writing Today,* Bantam Books' *Fifty Great Stories,* and many others. These books people may now buy at their corner drugstore. They can get more inexpensive books of good quality than they have time to read.

Providing suitable reading material for children and young people may be part of a state-wide project, such as that described by Schacter [38]. This was a bookmobile plan involving a three-way partnership of citizens and corporations, local communities, and the state government. Together they raised $300,000 for a hundred bookmobiles which circulate books to old and young in the most remote parts of the state.

Curriculum-materials Centers. Many small schools have no library. To supply the needs of these schools, and also to supplement the libraries of other schools, is the function of a centralized library or curriculum center. Such a center may serve all the schools in a county, as does the excellent curriculum center in Santa Barbara County, California. The task of these centers is to select, purchase, store, distribute, and promote all types of useful instructional materials. Through these centers, books and audio-visual aids are supplied all during the year, as teachers and pupils feel the need for them. It is a cooperative service involving parents, pupils, teachers, administrators, supervisors, and specialists in curriculum materials.

Each school, too, may have a reading-materials center that serves pupils and teachers within the school. Everyone in the school, and parents, too, should have a share in selecting the materials for this center. Serving as a reading room as well as a distributing center, it should be a comfortable, inviting place to read.

Classroom Library. Each classroom may have its own reading-materials center. Students and teacher should take joint responsibility for keeping this center well stocked with useful and interesting material. They may obtain a rotating supply of books, pamphlets, and magazines from the public library, from their homes, and from interested persons in the community, as well as from the school or county materials center.

At every grade level the classroom library may contain original stories which the students have dictated or written individually or as a group. If nothing in the students' lives seems to them important enough to tell or write about, the interest in original writing may be stimulated by

a picture. The picture may be shown to the group with the suggestion that they write a story about it. If further stimulus is needed, ask questions such as: "What is the picture about? What is going on? What led up to it? What is its title? What are the people in it saying and doing? How do you think they are feeling? What might happen next?" These stories should then be typed and bound together in a booklet with the picture on the cover. This technique, suggested by Dorothy Withrow, South Philadelphia High School, may reveal aspects of individual personalities as well as provide original, interesting stories which other students like to read.

One class browsed through old magazines donated to the group for the stories and articles of permanent merit and interest which they contained. These they cut out, bound, classified, and filed for convenient use.

New books may be introduced to the class and recommended to individual students. The teacher might say to Henry, "This is a book that I think you will like. It's about your favorite subject, horses." Peer opinions, too, have high prestige.

Fund-raising Methods. In a rural school in one impoverished county, years ago, the only reading material was the Sears Roebuck catalogue. In low-income regions the raising of money to buy books is a serious problem. In many communities, on the other hand, there is a wealth of reading material that has not been fully utilized.

Some schools have supplemented inadequate amounts allotted for the purchase of books by asking each family to contribute a small amount; by enlisting the help of the parent-teacher association and social and civic clubs; and by holding fairs and box suppers, giving plays, staging rallies, or engaging in other money-raising projects that are of educational value to children and adults. One school had a music festival for which the students in the art department decorated the outdoor court, and the music department prepared the program. The evening was an inspiration to all who participated and it brought in a goodly sum for the purchase of new books. High school students themselves have earned money to buy a 25-cent pocket classic which they donated to the class library after they had finished reading it. State or Federal funds should be available to supply less fortunate communities with reading material that will make possible the improvement of reading and personal development through reading.

USING READING MATERIALS TO BEST ADVANTAGE

Sometimes the more a teacher works, the less the pupils learn. If the teacher does all the selecting and planning, the pupils are deprived of some of the values of taking initiative and responsibility for their own reading, discovering where they can get the books and magazines that will give them the information they need. They need experience in learning to

communicate ideas they have gained from reading and in reading for pleasure and good citizenship.

These values, plus increased reading efficiency, may be attained in what, at first glance, seems to be a disorderly classroom: students talking together in small groups; books, magazines, and pamphlets being used by different groups all over the room. Pupils go to the library and wheel back on a bookcase with casters the books they need for their current project. They take responsibility for changing clippings on the bulletin board; they borrow books and audio-visual aids from the public library and museum; they bring books from home. Some current event or local interest may make a particular story especially appropriate at a certain time. One day all the pupils may look at a film related to the project. Another day some or all of them may supplement their reading by a trip from which they bring back vivid firsthand information. In such a classroom, books take their proper place among other means of serving the purposes of the group.

We adults enjoy discussing the books we have read. So do students. Knowing a discussion will follow their reading gives them an additional incentive to comprehend the story. A variation of the usual class discussion is to have a panel of three or four students who have read the same book sit around a table in the front of the room talking informally about the book and then answering questions asked by the rest of the class. Questions for discussion may be of three types:

1. Questions on incidents and details to assure adequate recall of the story
2. Questions about sequences and relations in the story
3. Questions to generalize about certain behavior or attitudes or to relate the story to their own lives

Dramatic Reading of Stories. The pupils will find much enjoyment in dramatizing some of these stories. . . . One pupil reads the narrative part; other pupils read the parts of the various characters. When they are ready, they present their dramatization to the class as a whole. The dramatization of a story they have all read is a pleasurable experience; perhaps more so than a new story, because they are familiar with it and can anticipate what the characters will say.

This is in marked contrast to the old procedure of going around the class, having each pupil stand up and read a paragraph or two. Under this system, the pupils who are not reading aloud are usually inattentive and the poor oral reader is embarrassed before his peers. Dramatizations of the stories, on the other hand, increase all the pupils' interest, comprehension, and enjoyment [49, pp. 3–4].

When a difficult book has to be taught, the skillful teacher tries to provide a background of experience that will make it more interesting and easier to read. For example, a teacher in the sixth grade who was

expected to teach Hawthorne's story "The Great Stone Face" spent a period in which he and the children who had seen the mountain told the others about it. Several more periods were spent in looking at pictures of the region and in reading simple, illustrated books about American life in those times. Then the teacher read the first part of the story aloud, to familiarize the class with Hawthorne's vocabulary and sentence structure and to interest them in the story. After they had finished reading the story themselves, they made a frieze depicting scenes in the story to decorate their room. This required further reading to be sure the costumes and scenery were authentic.

GUIDING INDIVIDUAL STUDENTS IN THEIR READING

The teacher's task is not to condemn students' reading but to guide them to better reading. This objective may be best reached by letting them read what they wish at first, regardless of its literary value. The teacher will make most rapid progress by providing activities in which the students discover for themselves that ability to read is of value to them and that they have the capacity to read better. This is the first step in assuring use of the books available.

Most guidance in reading will be done casually. When a student expresses an interest, the teacher may suggest a book along the line indicated. If the interest is genuine and the book suitable, connection between the book and the pupil will be made. But the gap between where he is and where the teacher would like him to be cannot be bridged all at once; he cannot be expected to desert "Terry and the Pirates" for *Ivanhoe*.

Teachers usually want to have some evidence that students have been doing the required reading. Some require only a simple record giving the title, author, date finished, and a statement as to how well the student liked the book. Other teachers require a more or less detailed review of the book. While generally disliked by students, book reviews may serve a useful purpose; they may be posted on the bulletin board, printed in the class or school newspaper, or kept in a file in the library to guide other students' reading. The analytical report, *Using My Reading Design* [41], shows both teacher and student a picture of reading interest in different areas—social science, natural science, and different types of literature. Still more effective are the teacher's conferences with the student about his reading program, and class discussion of different books and articles read by members of the group.

OTHER INSTRUCTIONAL MATERIALS AND EQUIPMENT

In addition to the basic texts, supplementary readers, stories, factual material, current magazines, and commercial materials covering a wide

range of reading difficulty and interests, we should mention some of the mechanical aids which promote the work. The tape recorder, which is of great assistance in the teaching of speech and certain oral-language activities, can be used to record book discussions, dramatic interpretations of books, reactions to newspaper or magazine articles, and the like. The playback of such recordings helps the students evaluate their organization of ideas, their reasoning, and the effectiveness of dramatic presentations or arguments. Interest in reading is contagious; through a well-presented recorded discussion which is sent to other classes or schools, the interest can spread.

A typewriter in the room makes possible a classroom newspaper which broadcasts ideas gained from reading. And it must not be forgotten that students learn to read better when they learn to express ideas better.

It is good to have access to an opaque projector for the projection of materials to be observed by the whole class, a filmstrip projector for the projection of exercise materials, and a motion-picture projector for the presentation of background materials, stories, or movies about reading and study skills (see Appendix B). It is desirable, too, to have access to radio and television for pertinent programs, and television and Kinescope recordings.

The reading-training devices which aim to improve reading by controlling eye movements have already been discussed. Although these mechanical devices tend to encourage a passive attitude on the part of the student, they may also produce convincing evidence of the student's improvement in certain skills and consequently result in more effective reading [31].

Community resources should be used. People with notable skills, ideas, and travel experiences may be invited to listen to students' reports, answer questions, and contribute to discussions. All these kinds of activities, equipment, and experiences relate reading to life—as it should be.

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CHAPTER 19

Personal Development through Reading

Reading is an interaction between the reader and the material read. Consequently, personal development through reading depends on the answers to such questions as these: What kinds of books are available? Can people read them? *Do* people read? What impact does reading have on people of different ages, abilities, and backgrounds?

READING MATERIALS AVAILABLE

The influence of the paper-bound books on the development of personality and character could be very great. By far the largest increase in general book sales in 1958 was of the inexpensive paper-bound books. Juvenile books were second and next in order were book-club books and religious books. The increase in the sales of paper-bound books is all the more interesting in the light of the finding that newspaper circulation has lagged behind the population increase: there has been a steady downward trend since 1950 in the daily circulation per household [31]. Nevertheless, newspapers are still read by 85 to 90 per cent of adults; 90 per cent of the parents of teen-agers subscribe to a daily newspaper.

More important than adult reading materials are books available to the young during their most impressionable years. Contrary to popular opinion, Anderson [1] found that "there is greater emphasis on the values of brotherhood, moral equality, and respect for human personality in the two modern readers than in the McGuffey book examined" [1, p. 58]. In modern social studies textbooks, however, Hechinger complained that

"controversy and critical analysis had been drained from their pages" [19, p. 9]. The impact of school books is important because such large numbers of children and young people are required to read them.

INFLUENCE OF DIFFERENT KINDS OF READING MATERIAL

Since reading is two-way communication between author and reader, the content of the books read is our first consideration. The reading of truly great books may help older children and adolescents to get a sense of direction and destiny in their lives and a clearer idea of their social responsibility. On the other hand, many books and magazines published today distort values; ridicule the good, the true, and the beautiful by associating them with "immaturity"; and give a false view of life. Some young people will read these books and reject them; others will unconsciously absorb some of their points of view.

A small amount of research has suggested features of books and magazines that seem to make the greatest impression upon the reader. Two studies on news-and-photo combinations found that photo captions were more effective in changing attitudes than were the stories alone [30], and that more extreme judgments resulted when the original meanings of the pictures and captions agreed than when they did not [24]. Engel and others [10] suggested that ambiguous news statements may strengthen bias on the part of the reader. They found that ambiguous statements were interpreted differently by different people, and that the direction of interpretation was determined by the previously existing bias of the reader. Ego involvement contributed to biased interpretations.

When publications are brought out to serve special groups, the selectivity can be expected to be even greater. In his review of two such studies, Gray [16] found that these reading materials are designed to serve special purposes and to cultivate certain attitudes.

VOLUNTARY READING

Many people can read but do not. However, literacy figures are somewhat misleading. Although a child or adult may be *able* to read books of sixth- or ninth-grade difficulty, he may be functioning at a lower level, or the environment may not provide the experiences that stimulate him to read. What people actually read determines the possible impact of reading on them.

In 1960, according to Hanna and McAllister [18], reading ranked fourth in young people's recreational preferences. Radio, television, and movies take, on the average, about 60 per cent of teen-agers' total available out-

of-school time. In general, reading tends to decrease as television viewing increases.

An investigation [28] into the habits and preferences of 260 middle-class urban families in Indiana with regard to communication media revealed that television would be the preferred medium if only one could be chosen. Of the families studied, 78 per cent had television sets. In 92 per cent of the families there was at least one newspaper reader, and in 71 per cent, at least one radio listener. The authors concluded that the vitality of newspaper content is of great importance in attracting readers.

A nation-wide survey [22] of 10,149 teen-agers as to what they read found that 78 per cent had read newspapers (not including comics) the previous day, spending about fifteen minutes on it; 45 per cent had read a nonrequired book, devoting about one-half to one hour to it; 80 per cent had watched television, spending from less than half an hour to about six hours at it; fewer than 25 per cent had read comics.

A study [9] on the content of nonfiction magazine articles for the decade 1947 to 1957 assumed that changes in the nature of published articles might reveal changes in public mood and interests. A significant increase was found in the number of articles dealing with personal development, both spiritual and physical. The authors concluded that there is an increased concern on the part of the reader with his own "orientation and adjustment." Burnett [4] also saw the potentialities in magazines—to provoke thought, improve taste, and develop ideals.

Likewise encouraging is the increase in Great Books programs for young people and adults [17]. The Junior Great Books Program [8] for able readers uses a dialogue-teaching process for studying the classics. Fifth- and sixth-grade children read and discuss books like Peter Pan, Little Women, Wonderful World of Mathematics. Those in grades 7 and 8 discuss Kim, Oliver Twist, Man with a Hoe, Walton, and others. The plan is projected through the twelfth grade. Other book clubs are reaching an ever-increasing number of children and adolescents. For example, in 1960, through the Scholastic Magazine book clubs, approximately twelve million books were distributed to teen-agers.

THE IMPACT OF READING ON INDIVIDUALS

The impact of reading on individuals is largely assumed. It is difficult to obtain proof of the influence of a particular book on a particular person. Yet personal development is one of the two main objectives of the teaching of reading. To our understanding of this outcome of reading, David Russell has made an outstanding contribution [34, 35, 36, 37]. We have many enthusiastic statements about the effect of reading on personal development. These introspective reports may be obtained in an interview,

by detailed questionnaires, by open-end questions, and by unstructured or freely written compositions. When obtained with the interest and cooperation of the students, such reports are usually authentic, concrete, and vivid [40].

A ninth-grade boy, certainly not a book enthusiast, described the influence on him of one book:

> On the whole, books do not influence me at all, but one book had a very great influence on me and that was *Rockne of Notre Dame*. This is the story of a man, a not very big man, who was not too good at sports physically but he became one of the best sports coaches that ever was. After reading this story my thoughts all turned to sports, and now sports are a major part of my life.

A ninth-grade girl described the personal value of books for her:

> Most of the time when I read a book I put myself in the characters' places even if I'm reading about an animal such as the dog in *A Dog Named Chips*.
> When I read the book *Career* there was a caption under the picture explaining what that person did, and when I read it I imagined myself in her place, doing all those wonderful things. When I finished the book I could have read it over again. I enjoyed it very much, because it is what I want to do when I graduate. It was all about airplanes. When they spoke about the planes I could just see them in the sky.

Another ninth-grade girl attributed a change in her way of thinking to the book *Almost April:*

> The girl in the book tried to be someone she wasn't. Because of that she got into a lot of trouble. She also had an experience in which she thought she was doing the right thing but her friends thought differently. I now think that everyone should be themselves and always do what they think is right.

A similar influence was expressed by another student of the same age:

> In the past I read a book called *The Golden Thorn*. After reading this book I felt that I had actually been there. It made me think of the people who are trying to be free. It made me feel as if I were one of them. It made me glad to be free. I think it made me kinder and more friendly to people who really need help.

A ninth-grade girl was given the following directions and questions: "Sometimes we wonder what reading does to people—what effect reading has on their points of view, attitudes, and behavior. Will you help us to find out? This is what you can do. Think back over the books you have read. Try to remember how any of the books influenced you. Do you think differently or feel differently or act differently after you have read the book or part of the book? Just write whatever you remember about how any book changed your way of thinking or feeling or acting." In response, she said—

Recently I read *Clay Fingers*. This girl broke her leg and couldn't go to college with her friends. This book showed me that if something of bad fortune happens to you, you shouldn't sit moping about it but make yourself useful or occupy yourself with some hobby which would benefit yourself and other people. If something does come up so that I can't do something I wanted to do, I think of this book and I don't mope around but take the news in the cheerfullest manner possible.

I read a short story for a book report. The name of it was *The Magic Night*. In this book it showed a group of kids having a wonderful time. On the way home they are speeding and crash with another car. Susie, a girl in the story, wakes up on the hospital bed. She finds that Molly, a girl who had gone with them, had been killed. Then Susie thinks—Mom, Dad, and other people say that the boy driving will get the blame. But I didn't tell him not to go fast. This makes me think that if I am with someone and they are doing something not quite right, then I should say something to them. This story made me think quite a bit about this.

We may also sometimes infer the effect of a book or article from our observation of students' responses in informal groups and more formal classes. In still more structured situations, we may observe and record an individual's response to a given story or article and invite his further introspection as to his thoughts and feelings about it.

Favorable and Unfavorable Conditions. The complexity of conditions that may affect the impact of a book on a person have been well analyzed and reviewed by Russell [36]. He notes four conditions: the characteristics of the reading material, the ideas the author hopes to communicate, the personality and background of the reader, and the setting in which the interaction between author and reader takes place. The variables are so interrelated that one can never say, "This kind of book will inspire the reader to be courageous," or otherwise influence his attitudes and behavior. Instead of striving to find one-to-one relations, research workers should study the outcomes of all four of these factors and describe the complex situations in which they are operating.

Characteristics of the Reading Material. The *format* of the book may invite or repel a reader. The *intrinsic interest* of the book, according to high school students, is a determining factor in what they read, how they read, and what they remember. One bright eighth-grade girl described the impact of one of Conan Doyle's books on her as follows:

I chose *Hound of the Baskervilles* because of its excellent intrigue and mystery so typical of A. Conan Doyle. The spookiness of the moor, the suspense of waiting for the quarry, the methods of Sherlock Holmes made this book outstanding in its field. While reading this book, you are dragged into the story and made to feel the moods as well as the actions of the characters. You are given the feeling of being a part of the story.

The *difficulty* of a book is a deterrent to many readers. Unfamiliar and drab words, lengthy and complex sentences, and poor organization are common sources of difficulty. It is obvious that personal development through reading cannot be achieved by material that is on the reader's frustration level. Piekarz [32] found that children who could not read a selection fairly well had fewer reactions to it, and more frequently gave literal rather than interpretative responses.

Difficulty of the reading material is, of course, relative to the student's reading ability. His skill in sensing the author's mood, intent, and purpose; in interpreting imagery; in detecting clues of character; and his ability to feel the emotional impact of a story—all would influence its effect on his attitudes, points of view, and even on his behavior. It seems obvious that the development of an individual's reading ability is a prerequisite to his personal development through reading. Without adequate reading proficiency the individual lacks access to one of the most important avenues of learning. Thus, poor reading indirectly affects an individual's personal development by blocking paths he might otherwise have taken and decreasing self-esteem and self-confidence. On the positive side, the acquisition of any reading skill apparently increases self-development, and self-development concurrently finds expression in reading achievement. The child who is reading is growing. A thirteen-year-old boy with a consuming interest in science and mathematics and with a strong tendency to feel inadequate had the wonderful experience of finding his "discoveries" verified in his reading. On the basis of his reading he had concluded that a certain relationship must exist between the force of gravity and distance, and he was greatly excited and pleased when he discovered later in his reading that such a relationship did in fact exist. This experience contributed greatly toward developing in him a feeling of capability.

The *feeling tone of words,* "high-value" words, stereotypes, and ambiguity in meaning may determine the reader's interpretation of a passage.

Content of Books and Articles. This has been analyzed with respect to the kind of characters they portray, the concepts of democracy stated or implied, the qualities associated with personal achievement as exemplified in the characters, cultural patterns and family-life situations, kinds of persons treated positively in comparison with kinds of persons treated negatively, middle-class values presented, and assumptions that might be accepted uncritically by students [36]. Studies of this kind give teachers a definite idea of the content of certain books: historical fiction, biographies, and other kinds of children's literature, comic books, magazines, and best-selling novels.

Over the years there has been a marked change in the content of children's and adults' reading. In the colonial period reading was confined almost entirely to religious books. During the nineteenth century, knowledge of new scientific discoveries and inventions was eagerly acquired.

Today, although large numbers of religious books are published, the predominant emphasis of many of the popular books—and still more so of radio and television programs and commercials—is on violence and hostility, sex, or indolence—"take it easy," and "do what comes naturally."

The influence of the content of the reading material may be illustrated by the following quotations from retarded eighth-grade students who read, for the most part, books and magazines of poor quality:

I read a love comic book and I felt kind of strange inside. I felt sorry inside because there was this girl named Elaine and this boy named Lefty. So Elaine found Lefty kissing his cousin Pat. So Elaine thought that he was playing her for a sucker. Then he came over to her house and she quit him. But he asked her to forgive him. . . .

I've been reading a lot about movie stars and love books. I've learned a lot for my age.

I used to think teen-age marriage was the craziest thing in the world. But yesterday I read in a magazine about a teen-age couple that married when they were very, very young and they got along better than many adults.

Personality and Background of the Reader. What the reader brings to a particular book in addition to reading skill is a major influence on its impact on him. His emotional readiness, his background of experiences, his intelligence, his credulity and susceptibility to persuasion, his concept of himself, and his convictions or attitudes about the topic being read—all are possible personal factors that determine a book's influence. The reader's need at the moment and his anxiety about his own problems create a readiness for certain content that otherwise might be ignored.

"Self-responsibility" is another quality that may partly determine an individual's response to reading [39]. An over-indulged child who has everything that money can buy, who has not had to do anything for himself, and who has had praise and approval indiscriminately bestowed upon him may never have learned to put forth the effort that thoughtful reading demands. Consequently, books may have only a superficial influence on him.

The Reading Environment. The attitudes and expectancies of the group and its demand for conformity are other potent factors in determining the impact of reading on the individual [21]. Prestige and self-esteem are gained by reading books approved by the group. The teacher's emotional response to a book often makes a lasting impression on the students, as well as the comments and attitudes of other students.

Possible Effects of Reading. Reading may affect personal development in many ways. In response to a questionnaire [42], almost two-thirds of 1,256 college students felt that books had contributed to the development of their philosophy of life. About one-third thought that reading had changed their attitudes, stimulated them to imitate the characters por-

trayed, helped them to find their ideal self, and develop some of the personal qualities they had read about. Some also said that reading had helped them to identify and solve some of their problems. Another group of 46 college students revealed, through a sentence-completion test, changes in attitudes toward themselves, their reading and studying [11].

Gains in Information. Effective reading increases the individual's fund of useful information. "Books," one boy said, "answer many of the questions that I wonder about." The more one learns from reading, the richer the background he brings to interpret what he reads and the more intelligent he appears. The greater also will be his ability to interpret and enjoy literature. Information about vocations may lead to wiser vocational decisions; information about personal problems and how other persons, real or imaginary, have handled them gives clues to the solution of one's own problems.

A psychiatric comic strip on "the onset and cure of a mild case of paranoid psychosis" influenced some high school sophomores in three schools to have a more favorable attitude toward mental health. There was some evidence that "the comic strip episode helped to sharpen and clarify perceptions and definitions of mental health problems" [33, p. 342]. In another field, Sorenson [38] found a definite relationship between the number of magazines read and the farmers' knowledge of their soil. Some of the farmers who had an eighth-grade education or less were helped the most.

Changes in Behavior. Many kinds of understanding gained from books enrich everyday experiences and may change behavior. Tumin [41] found reading to be one factor in reducing tension among white Southerners in the emotionally charged regions concerned with racial desegregation in the schools. He showed that exposure to newspapers and magazines as well as to radio and television—all of which media acquainted the Southerner with a Northern or national point of view—contributed to building readiness for desegregation in certain North Carolina communities.

Cannell and MacDonald [6] reported some impact of health news on attitudes and behavior. Of sixty smokers who had changed their smoking behavior, 38 per cent said magazine articles were a main reason. They felt the magazine was the most reliable source of information, newspapers less, and radio and television considerably below these two sources in importance. However, even well-educated smokers were less likely than nonsmokers to accept the facts in the article or even read it.

Sometimes students report changes in behavior resulting from reading a certain book: "Once in grammar school our home economics teacher had us read a book called *Manners for Millions*. This book showed how ill mannered I really was and taught me many new ways of showing how well mannered I could be." An initially retarded reader in the eighth grade wrote: "Once I read a book about space travel and it got me interested in

the subject. It was mostly pictures, but I got other books with more information."

People feel freer to ask of books what they cannot ask of other people. "Reading, then, can exert the same influences as any interpersonal experience" [29].

Changes in Attitudes and Values. Students on all educational levels have mentioned changes in attitudes as a result of reading: attitudes toward oneself and toward reading, toward other people, toward family relations, toward one's country, toward war and peace. A seventh-grade girl expressed the impact of a book on her ability to feel with others:

> The book *The Trembling Years* was the story of a girl struck with polio. It explains the feelings she has, and the thoughts that she has as she goes through pain and trouble.
> I like this book because it seemed so real, you could almost feel the pain as she felt it.
> When I finished the book it made me realize how little my own problems are, and how much I have compared to many.

Other high school students said some books helped them to persevere, deepened their religious feeling, changed their behavior toward their families, made them realize that they should stop fighting with their brothers and sisters, "made me think about the kind of life I'd like to lead." After reading *Dear and Glorious Physician,* a ninth-grade girl wrote: "I had the feeling I should go out and do something great. Of course, this feeling did not last long, but it did get me to thinking just what I can do for humanity."

Social reforms have been attributed to certain books: the emancipation of the Negro to Harriet Beecher Stowe's *Uncle Tom's Cabin,* municipal reforms to Steffens's *The Shame of the Cities,* pure food and drug acts to Sinclair's *The Jungle,* and progressive education to John Dewey's *Democracy and Education.* Voltaire said that books rule the world, and many believe that "books are a potent factor in the shaping of wisdom and belief" [13, p. 23]. Many years ago Gray concluded, from his review of research, that the impact of reading upon the modern reader can change attitudes, reduce prejudices, and affect votes.

Value and standards can be conveyed by literature—courage, independence, fortitude, simplicity, and loving kindness. Such basic values are needed more than ever in a technological, industrial world. These values are more likely to be acquired through reading than through the fleeting current television programs.

Appreciations and attitudes may be manifested in a variety of ways: the individual's pleasure in reading to others, his absorption in the book he is reading, his desire to read similar books and supplementary materials. He may be stimulated to write plays or draw pictures based on his reading,

imitate the characters portrayed, try to express his own philosophy of life. As appreciation grows, the student becomes more aware of the elements in good literature and of other elements that could be improved.

Changes in the Self-concept. As a result of reading, an individual's self-concept may be modified. One ninth-grade girl expressed this kind of experience as follows:

I just finished reading a book, *Jane Eyre*. It was a touching story. It showed me that we should follow God's calling; do what He wants us to do. It showed me how to be a person who isn't selfish or hard. Also it showed me you don't have to be pretty to be well liked. In these ways this book affected my feeling about myself and also to some extent my acting.

Books on science as well as literature, through their effect on the individual's perception of himself, may have an organizing, integrating influence on his personality. An experience of this kind was recollected by a highly gifted adult:

My high school arranged for us to use the public library if we wanted to. I had always enjoyed reading, and now found it marvelous to be able to roam among the shelves unhindered. Some titles drew me like a magnet—books describing the wondrous universe which we inhabit and about which I had never learned anything. *The Stars in Their Courses, the Universe around Us* —these and other books I read avidly, awed before the immensities and the splendors which utterly outstripped my imagination.

It was when I was reading the latter book that it happened. Sir James Jeans had described the unimaginable vastness of the cosmos with its swirling galaxies, and the inconceivable minuteness of the atom, when suddenly I *knew* with an absolute conviction that went through me as a physical shock that within that immeasurable range I, too, *belonged*.

It was the most truly religious experience of my life—an experience wherein was permanently established my ultimate belongingness in the over-all scheme of existence.

"Reading for personal fulfillment" demands that the adolescent or adult take time to compare his concept of himself with real or fictional characters who, "when circumstances demanded, were able to call up the necessary reserves of courage and resourcefulness" [5, p. 287].

Reading and Developmental Tasks. The relation of reading to developmental tasks and character development represents a more conscious attempt to influence child and adolescent development through selected readings. The work of Brooks has already been mentioned (see Chapter 12). Kircher [25] compiled a bibliography originally used in the Child Guidance Center at the Catholic University of America. It is a list of books with constructive concepts designed "to develop within the mind of the child wholesome ideals and principles of conduct" [25, p. 5]. The theory underlying bibliotherapy is that the reader may identify himself with the desirable character or may glean principles which clarify some of his difficulties and

serve as a guide to action. The problem is to introduce the right book to the right child at the psychological moment.

Reading and Mental Health. Many authorities have recognized the reciprocal relation between reading and mental health. Benjamin Spock referred to the effect of failure in reading on a child's general adjustment. Morris Krugman presented evidence of the improved mental health of children enrolled in a special reading program, and concluded that—

> a reading disability, or severe retardation in reading, has the same profound influence on educational growth as a severe emotional involvement. Both limit successful functioning, cause feelings of inadequacy and frustration, bring about disturbed relationships, influence outlook on life, and result in a variety of undesirable behavior manifestations [26, p. 10].

In his book on mental health, Kaplan described the impact of books on children as follows:

> Books and stories can make a vital contribution to the mental health of children. They provide a medium through which boys and girls may be encouraged to discuss their personal problems; they make available a means through which youngsters can escape, temporarily, from their tensions and frustrations; and they furnish vicarious experiences which enable children to gain deeper insight into their own behavior by experiencing the life problems of others [23, p. 355].

Luella Cole [7] emphasized the values of reading in adolescent development. It provides tension relief, a safe outlet for aggressions, insights contributing to the solving of conflicts, and characters with whom to identify. It may result in greater self-realization and security.

CONCLUDING STATEMENT

Reading may influence people negatively as well as positively. This fact must be faced. Although people tend to select from a book what they need at a particular time, the sounder and truer the ideas from which they can select, the better.

Since reading is part of the individual's total experience, the impact of a selection is reinforced or neutralized by his other experiences. Although people tend to read in conformity with their established attitudes and prejudices, it is reasonable to assume that a book or article may be one element in modifying existing attitudes. The introspective reports from children and adolescents at least indicate an awareness of the possible influence of books on their knowledge, convictions, attitudes, and behavior.

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CHAPTER 20

Trends in the
Improvement of Reading

Certain trends are discernible in both the theory and the practical aspects of reading: the nature of the reading process, methods of teaching reading, instructional materials and equipment, the place of reading in the curriculum and in the total development of the individual, and methods of appraising development in and through reading. Authorities in the field, while differing in the emphasis they give to certain trends, agree on the complexity of the reading process and the need for a flexible multiple approach, stressing the applications of ideas gained from reading.

THE READING PROCESS

Preoccupation with eye movements has given way to emphasis on the role of intelligence, vocabulary, and comprehension in getting meaning from the printed page by bringing meaning to it [4, p. 2]. "Eye movement studies showed clearly that mature reading was really an act of synthesizing ideas, not an analysis of words or letters" [15, p. 16]. However, in the beginning stages of learning to read, the ability to identify sounds in spoken words and to associate them with recognized letter forms and names is basic to progress in reading.

Children differ in their perceptual background and learning rate for reading. Those who are high in these respects can go immediately into reading; those who are deficient in these abilities can be given specific training in visual and auditory discrimination [7].

While not discounting the importance of a basic vocabulary and word recognition skills, reading experts are emphasizing E. L. Thorndike's early insight of "reading as reasoning." How we think determines the quality of our reading. This concern with interpretation, critical reading, and application of what we read leads directly to the broad view of reading—reading that stirs our feelings, changes our attitudes, and affects our lives and the lives of others. Reading of this kind can stem only from a complex psychological process. Reading is an expression of the total personality, involving the individual's concept of himself, perception of his environment, and previously acquired competencies. Thus viewed, motivation becomes part of the dynamic personality, rather than specific incentives or physiological drives.

The role of chemical-physiologic components of reading proficiency is being seriously explored. Research has shown that disturbances of this kind can affect an individual's perception and behavior. Minimal brain damage and low energy level may determine how the child responds to the reading situation. Any physical handicap may have secondary emotional effects on the individual's progress in reading.

METHODS OF TEACHING READING

Instead of *waiting* for reading readiness to develop, teachers should recognize the readiness of some children to begin reading immediately. In other cases, they should help the children develop the perceptual background and emotional responses necessary for success in learning to read. Instead of giving isolated drill in phonics, teachers should, from the beginning, make use of "meaningful language units such as words, sentences, stories, and group experiences, and cultivate persistently a thoughtful reading attitude. ... The eclectic trend ... emphasizes from the beginning both meaning and the skills of word recognition" [9, pp. 17–18].

A second trend in methods of teaching, which may be described as "learner-centered," adapts methods and materials to the ability, needs, interests, and activities of the individual. Children learn by many different methods; there is no one method best for all students. Greater provision for individual differences is indicated by the sudden popularity of the individualized reading program and the multilevel reading laboratories. The initial enthusiasm for individualized reading, on sober second thought, is being tempered by the recognition that it is only part of the reading program, which at its best includes shared group experiences.

INSTRUCTIONAL MATERIALS AND EQUIPMENT

The most unique and widely used materials developed during the last few years are the multilevel reading, spelling, and writing laboratories on

all educational levels, developed by Don Parker and the Science Research Associates staff; the simplified modern stories on adolescent and adult levels of interest, such as *Teen-age Tales;* the testing-practice-teaching material in the content fields [10]; and the learning machines, based on the psychological theory developed originally by Skinner. The machines involve a psychological analysis of steps in the learning process and a mechanical device for rewarding, or at least for giving a knowledge of, results as the student proceeds in his learning task.

The emphasis in the use of tachistoscopes and films that expose words and phrases for a small fraction of a second was shifted from attempting to increase eye span to the purpose of quickening the association between the visual impression of the printed symbol and its translation into meaning by the mind of the reader. The emphasis on mechanical devices to increase speed of reading is being modified in the direction of an emphasis on their motivational value.

Audio-visual materials of various kinds have become an intrinsic part of the reading program rather than merely aids. Their use is likely to continue to increase. The potentialities of viewing and listening for motivating reading and contributing to comprehension of reading material are being recognized, though not yet realized.

More use is being made of children's literature to supplement the basic reading materials. For able learners some books, especially the basic readers, are too simple. Classes where extensive reading is the rule have been found to produce better readers than classes limited to a single basic text and workbook. The need to differentiate the reading approach according to the reader's goal and the nature of the material is becoming more widely recognized.

Progress in developing more effective teaching methods and materials is limited by a lack of knowledge of the mental processes of students of different abilities and interests when reading for different purposes, and the conditions which are most conducive to development in and through reading. However, classroom practice usually lags behind the psychological theory now available. According to Durrell [7], the two greatest problems in the improvement of reading instruction are "effective teacher education" and "provision of improved instructional materials" [7, p. 157].

THE PLACE OF READING IN THE CURRICULUM

Concern for the improvement of reading has extended beyond the primary grades into college and adult years. "One of the distinctive marks of progress during the last three decades has been the extension of systematic guidance in reading into high schools and colleges" [9, p. 22]. Each period of development requires challenging higher levels of competence in reading.

APPRAISAL OF DEVELOPMENT IN AND THROUGH READING

The importance of appraisal in improving reading instruction is being increasingly emphasized. It is an intrinsic part of teaching and essential to learning. It helps to produce growth, not merely measure it. Teachers' appraisal helps students to see their progress. Encouraged by success, they become more self-confident and ready to take more responsibility for the improvement of their reading. Teachers, too, need the stimulus of success and perspective on their daily work. The process of appraisal involves (1) stating the goals as specific behavior that can be observed or measured, (2) obtaining evidence of changes in behavior, (3) evaluating the desirability or worth of these changes, and (4) using the results to improve reading.

The appraisal procedures should be as broad as the concept of reading and the program planned to achieve the broad objectives. Consequently, evidence of growth cannot be obtained from standardized tests alone. All the diagnostic methods described in Chapters 14 and 15 are useful in appraising reading development. They range from the most informal casual observation of students in the classroom to precisely standardized procedures.

Observation is of the greatest importance in the early years. Day by day the observing teacher can note growth in the child's speaking vocabulary, his recognition of words in his environment, the way he reads aloud, his word attack skills, as well as his attitude toward himself and toward reading. Informal tests, practice exercises, and standardized tests give further evidence of his progress in reading. Similarly, all levels of comprehension may be studied in the teaching-learning situation and by means of the informal group or individual reading inventory and informal and standardized tests. The testing-teaching-evaluation procedure developed by Melnik [10] bridges the gap between the hurriedly made teacher test and the standardized test.

Important evidence of students' reading processes, attitudes, and feelings interfering with or contributing to effective functioning may be obtained through introspective reports written freely and spontaneously by the students or communicated confidentially during an interview.

Ability to organize and express ideas orally or in writing may be appraised through group discussion, free response, creative-type compositions, the writing of research-type reports, and original plays, stories, or dramatizations based on reading. Some of these productions may be partly evaluated by audience reaction.

Attitudes, feeling responses, and the effect of reading on behavior can be inferred only by observing the students' behavior or taking at face value any verbal communication they may feel free to make. Of special

interest are students' reports of ways in which they have been influenced by a particular book or article. These personal documents are of special value for self-appraisal. They make the student more alert to why and how he is reading and the progress he has made over a period of time.

The appraisal of the reading program as a whole follows the same general steps. In addition to obtaining evidence of changes in students, information should be obtained about changes in attitudes and teaching methods of all the faculty members and cooperation and coordination among the persons concerned with the reading program. The functioning of the reading program on all educational levels should be examined for strengths and weaknesses. Much valuable information may be obtained from all members of the school staff, from parents, and from the students themselves.

The approach should be primarily positive. More attention should be given to positive growth factors on which to build than on errors to be corrected. Evaluation is not an end in itself; it is a means to better reading. It should be integrated with instruction. The sooner evaluative data are used, the better. It is important to obtain evidence of growth in the broad aspects of reading and also of conditions conducive to the improvement of reading.

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APPENDIX A

Useful Information about Common Prefixes, Suffixes, and Roots[1]

PREFIXES

Prefix	Meaning	Examples
a (ab)	from, away	abnormal, abdicate, avert
a (an)	without, not	aseptic, anesthetic
ad	to, toward	adjust, adjourn, administer
ambi (amphi)	around, both	ambidextrous, ambiguous, amphibious
ante	before	anteroom, antedate
anti	against, opposite	antithesis, antagonist
bi	two, twice	bisect, bicycle, biscuit
circum	around	circumscribe, circumvent
con (co, col, com)	together, with	concur, connect, contend, combine, collect
contra (counter)	against	contradict, contraband
de	from, down from	dejected, delegate, degrade
dis (di)	apart, not	dispatch, dismiss, dishonor
dia	through, around	diameter, dialogue
epi	upon	epitaph, epiphenomenon
eu	well	euphemism, euphony
ex	out of, from	expel, exodus, exhume
hetero	different	heterodox, heterogeneous
hypo, hyph	under, below	hypothesis, hypocrite

[1] Ruth Strang, *Problems in the Improvement of Reading in High School and College*, rev. ed., pp. 376–377, The Science Press Printing Company, Lancaster, Pa., 1940.

in (il, un, ir)	into, not	inconsistent, inelegant, illegible, irreverent
in, en	in, into, among	invade, include, entice
inter	between	interpose, interurban
intro	within, against	introspective, introduce
mono	single, one	monograph, monorail
non	not	nonalcoholic, nonentity
ob	against	obtrude, obstruct, object
pan	whole, all	Pan-American, pantheist
per	fully, through	peruse, perturb
peri	around, about	perimeter, peristyle
post	after, behind	postpone, post-mortem
pre	before	precede, prelude
pro	for, forward, in front of	propose, program
re	back, again	renew, reiterate, repress
retro	backward	retrospect, retrograde
se	aside	seclude, secede, segregate
semi	half, partly	semicircular, semiannual
sub	under	subway, subnormal, subject
super	over, above	supercilious, superfine
syn (sym)	together with	synthesis, syntax, sympathy
trans	beyond, across	transgress, transatlantic
tri	three, thrice	trisect, triangle, triplets
ultra	beyond	ultramontane, ultramarine
un	not	unkind, unnecessary

SUFFIXES

Suffix	Meaning	Examples
-able, -ible	capable of being	serviceable, credible
-ace, -acy -ance, -ancy }	state of being	disturbance, intimacy
-age	act or condition	dotage, marriage, bondage
-al, eal, -ial	relation to, that which, on account of	judicial, credentials, elemental
-an, -ean, -ian	one who, relating to	American, statistician
-ant	adj.: being	resonant, vacant
	noun: one who	attendant, servant
-ar, -er	relating to, like	lunar, vulgar, solar
-ary	adj.: relating to	residuary, contrary
	noun: one who	dignitary
	place where	sanctuary
-ate	adj.: having quality	fortunate, desolate
	noun: one who	prelate, advocate
	verb: to make	celebrate, agitate
-cle, -acle -icle, -cule }	little	animalcule, particle molecule, pinnacle

-ee	one who is (object of action)	trustee, employee devotee
-eer	one who does	pamphleteer, auctioneer
-en	(1) little (2) made of	maiden, kitten earthen, olden
-ence -ency	state or quality	independence, violence dependency
-ent	adj.: being noun: one who	dependent, patient resident, student
-et, -let	little	lancet, leaflet
-fic	causing, producing	soporific, terrific
-fy, -ify	to make	magnify, simplify
-hood	state, condition	motherhood, manhood
-ic	like, made of	plastic, magic
-ice	that which, quality or state of being	artifice
-id	pertaining to, being in a condition of	squalid, placid
-ile	relating to	puerile, imbecile
-ion	act, or state of being	coercion, fusion
-ise, -ize	to make	colonize, memorize
-ist, -ite	one who	optimist, theist
-ity, -ty	state	unity, vicinity
-ive	relating to	legislative, decorative
-kin	little	napkin, lambkin
-less	without	hopeless, worthless
-ment	state of being, act	amendment, development
-or, -ar, -e	one who, that which	elector, engraver dormitory, factory
-ory	relating to that which pertains to place or serving for	commendatory, explanatory
-ose, -ous	abounding in	verbose, grandiose, gracious
-some	full of	troublesome
-tude, -itude	condition	beatitude, aptitude
-ule	little	capsule, globule
-ward	turning to, in direction of	heavenward, forward
-wright	doer, worker	cartwright, shipwright

SOME COMMON LATIN ROOTS

acer, sharp
ager, field
ago, agere, egi, actum, to rouse or stimulate
albus, white

alter, other
amare, to love
ambulare, to walk
amicus, friend
amor, love

annus, ring or year
aqua, water
arare, to plow
audio, audire, audivi, auditum, to hear
aurum, gold
avis, bird
bene, good or well
bonus, good
bos, bovis, ox
brevis, short
cado, cadere, cededi, casum, to fall
canis, dog
cantare, to sing
capio, capere, cepi, captum, to take
cedo, cedere, cessi, cessum, to go
celer, quick
centum, a hundred
cor, cordis, heart
corpus, corporis, body
crux, crucis, cross
dexter, right
deus, god
dominus, master
domus, house
dormire, to sleep
duo, two
dux, ducis, leader
ego, I
eo, ire, ivi, itum, to go
facio, facere, feci, factum, to do or
   make
felix, happy
fero, ferre, tuli, latum, to carry
fidus, faithful
finis, end
fortis, strong
frater, brother
habeo, habere, habui, habitum, to have
   or hold
homo, hominis, man
jungo, junctum, join
juvenis, young
lac, lactis, milk
lego, legere, legi, lectum, to read or to
   pick out
leo, leonis, lion
lex, legis, law
liber, book

liber, free
lingua, tongue
locus, place
lux, lucis, light
magister, master
mater, mother
manus, hand
mare, maris, sea
medium, middle
mirare, to wonder
miser, wretched
mitto, mittere, misi, missum, to send
mors, mortis, death, mortal
navis, ship
niger, black
nihil, nothing
novus, new
nox, noctis, night
omnis, all, entire
pater, father
pendo, pendere, pependi, pensum, to
   hand
pes, pedis, foot
plicare, to fold
pono, ponere, posui, positum, to put,
   to place
scribo, scribere, scripsi, scriptum, to
   write
senex, old
solus, alone
soror, sister
spirare, to breathe
sto, stare, steti, statum, to stand
terra, earth or land
traho, trahere, traxi, tractum, to draw
umbra, shadow
unus, one
urbs, urbis, city
utilis, useful
velox, swift
venio, venire, veni, ventum, to come
veritas, truth
verto, vertere, verti, versum, to turn
via, way
video, videre, vidi, visum, to see
vir, man
virtus, strong
vivo, vivere, vixi, victum, to live

APPENDIX B

Films in the
Reading Program

The following films are intended to help teachers and pupils understand and appreciate the reading process as well as related processes, such as efficient study and use of the library. This list of films does not include those designed to be used in training pupils in the mechanics of reading.

All motion picture films listed are designed to be used with 16-mm sound projectors. The information given includes the level or levels for which each film is suitable (p, primary; i, intermediate; jh, junior high school; sh, senior high school; c, college; ad, adult); the length of the reel or set of reels in minutes; and whether available in black and white (BW) or color (C). The date the film was released is also indicated.

I. FILMS AND FILMSTRIPS FOR TEACHERS AND PROSPECTIVE TEACHERS OF READING

FILMS

1. *Gregory Learns to Read,* Wayne State University, 1957 (c, ad; 28 min; BW and C).
2. *Individualized Reading Instruction in the Classroom,* Bureau of Publications, Teachers College, Columbia University, 1957 (c, ad; 20 min; BW and C).
3. *Mike Makes His Mark,* National Education Association, 1955 (c, ad; 29 min; BW and C).
4. *Skippy and the Three R's,* National Education Association, 1953 (c, ad; 29 min; BW and C).

5. *They All Learn to Read,* International Film Bureau, 1955 (sh, c, ad; long version, 26 min, standard version, 22 min; BW).

6. *Why Can't Jimmy Read?* Syracuse University, 1950 (c, ad; 15 min; BW).

FILMSTRIPS

1. *Elementary Grade Teaching Techniques: Reading,* The Jam Handy Organization, 1955 (set of 13 filmstrips, 19 to 83 frames each; c, ad; C, sound).

II. FILMS AND FILMSTRIPS FOR PUPILS

A. How to Improve Reading and Study

FILMS

1. *Better Reading,* Encyclopaedia Britannica Films, Inc., 1952 (jh, sh, c, ad; 13 min; BW and C).

2. *A Book for You,* McGraw-Hill Text-Films, 1959 (jh; 17 min; BW).

3. *Choosing Books to Read,* Coronet Films, 1948 (jh, sh; 11 min; BW and C).

4. *How Effective Is Your Reading?* Coronet Films, 1951 (jh, sh; 11 min; BW and C).

5. *Improve Your Reading,* Coronet Films, 1947 (jh, sh; 11 min; BW and C).

6. *It's Fun to Read Books,* Coronet Films, 1951 (i, jh; 11 min; BW and C).

7. *The Language of Graphs,* Coronet Films, 1948 (i, jh, sh; 13½ min; BW and C).

8. *Learning to Study,* Encyclopaedia Britannica Films, Inc., 1954 (jh, sh; 14 min; BW).

9. *Rapid Reading Process,* The Developmental Research Institute, Inc., 1951; reprinted, 1960 (sh; 11½ min; BW).

10. *Reading Maps,* Encyclopaedia Britannica Films, Inc., 1955 (i, jh; 11 min; BW and C).

11. *Speeding Your Reading,* Teaching Aids Exchange, Inc., 1947 (jh, sh, c, ad; 10 min; BW).

12. *Understanding a Map,* McGraw-Hill Text-Films, 1952 (i, jh; 11 min; BW).

13. *What Is a Map?* McGraw-Hill Text-Films, 1949 (p, i, jh, sh, ad; 11 min; BW).

B. How to Improve Vocabulary

1. *Build Your Vocabulary,* Coronet Films, 1948 (jh, sh; 11 min; BW and C).

2. *Do Words Ever Fool You?* Coronet Films, 1948 (i, jh; 11 min; BW and C).

3. *We Discover the Dictionary,* Coronet Films, 1946 (i; 11 min; BW and C).

4. *Who Makes Words?* Coronet Films, 1948 (i, jh; 11 min; BW and C).

5. *Word Building in Our Language,* Coronet Films, 1959 (jh, sh; 11 min; BW and C).

C. How to Read Specific Kinds of Literature and Do Specific Kinds of Study

FILMS

   1. Basic Study Skills Series, Coronet Films, 1948–1952 (10 films, each jh, sh; 11 min; BW and C).

> *Find the Information*
> *Homework: Studying on Your Own*
> *How to Develop Interest*
> *How to Judge Authorities*
> *How to Judge Facts*
> *How to Read a Book*
> *How to Study*
> *Know Your Library*
> *Library Organization*
> *Look It Up*

   2. Literature Appreciation Series, Coronet Films, 1952 (6 films, each jh, sh, c; BW and C).

> *English Lyrics* (11 min)
> *How to Read Essays* (13½ min)
> *How to Read Novels* (13½ min)
> *How to Read Plays* (11 min)
> *How to Read Poetry* (11 min)
> *Stories* (13½ min)

   3. *How to Read Newspapers,* Coronet Films, 1951 (jh, sh; 11 min; BW and C).

FILMSTRIPS

   1. *Learning to Study,* The Jam Handy Organization, 1952 (7 filmstrips, each jh, sh, c; BW and C).

> *Study Headquarters* (33 frames)
> *Getting Down to Work* (34 frames)
> *Using a Textbook* (26 frames)
> *Taking Notes in Class* (29 frames)
> *Giving a Book Report* (29 frames)
> *Writing a Research Paper* (32 frames)
> *Reviewing* (27 frames)

D. Background of Literature

FILMS

   1. New England Authors Series, E. L. Morthole, 1950 (each 1 reel; 12 min; C).

   2. Painter and Poet Series (Films from Britain), Contemporary Films, Inc., 1952 (8 films; 31½ min; BW).

   3. Background of Literature Series, Coronet Films, 1950 (each 1 or 1¼ reels; 11 or 13½ min; BW and C).

   4. American Literature Series, Coronet Films, 1953 (each 1 reel or 1¼ reels; 11 or 13½ min; BW and C).

E. Addresses of Film Companies

1. Bureau of Publications
   Teachers College
   Columbia University
   New York 27, N.Y.
2. Contemporary Films, Inc.
   267 West 25 Street
   New York 1, N.Y.
3. Coronet Films
   Coronet Building
   Chicago 1, Ill.
4. The Developmental Research Institute, Inc.
   500 Fifth Avenue
   New York 36, N.Y.
5. Encyclopaedia Britannica Films, Inc.
   1150 Wilmette Avenue
   Wilmette, Ill.
6. International Film Bureau
   Chicago, Ill.
7. The Jam Handy Organization
   2821 East Grand Boulevard
   Detroit 11, Mich.
8. McGraw-Hill Book Company, Inc.
   330 West 42 St.
   New York 36, N.Y.
9. E. L. Morthole
   8855 Lincolnwood Drive
   Evanston, Ill.
10. National Education Association
    1201 16 Street, NW
    Washington 6, D.C.
11. Educational Film Library
    Syracuse University
    Building D-7, Collendale Campus, Colvin Lane
    Syracuse 10, N.Y.
12. Teaching Aids Exchange, Inc.
    P.O. Box 1127
    Modesto, Calif.
13. Wayne State University
    Detroit 1, Mich.

Reading Materials for the Junior and Senior High School Grades and for College

The teacher of reading at the high school or college level must be able to choose materials appropriate for use with individuals or groups at varying stages of reading maturity. Before 1935, there was available to teachers of reading very little material that was specifically designed or selected for use in reading instruction in high school. This kind of material was nonexistent in the college. Consequently, it was necessary for teachers of reading to spend much time locating and duplicating materials suitable for their objectives and for the reading interests and abilities of their students.

During the last twenty-five years, there has been rapid multiplication of reading materials for both high school and college. It is no longer necessary to depend on one reading workbook or textbook alone. The use of a large amount of supplementary material is highly desirable. This procedure keeps the work of the reading course from becoming too narrowly stereotyped and routinized and enables the teacher to take account of individual interests and needs. The development of readability formulas in recent years lends an objective basis to the selection of appropriate material from different sources.

The kinds of sources of materials for remedial, corrective, or developmental reading in the high school and college are as follows: (1) reading workbooks, (2) reading textbooks or textbook series for the secondary school or college, (3) materials for vocabulary training, (4) study-habits workbooks and guides, (5) materials for use with reading films, and (6) books for free reading. Let us consider each of these sources and note some of the titles that are available in each category.

READING WORKBOOKS

Secondary School. Several well-designed and widely used reading workbooks for the secondary school have been published within the last ten years. Many of these are revisions of earlier workbooks. Most of them are in the nature of workbook series designed to cover a rather wide range of grade levels and reading abilities.

An attractive set of workbooks based on much practical experience is a series of SRA Better Reading Books 1, 2, and 3 by Elizabeth A. Simpson [48]. Each workbook contains twenty practice exercises, twenty reading selections, and twenty tests, and is accompanied by a progress folder in which the pupil may keep a record of his growth in reading achievement. This series is suitable for use with junior and senior high school pupils and may also be used with college students and adults who are slow readers. Mrs. Simpson has also issued a teacher's manual, *Helping High School Students Read Better* [49], which may be used as a guide in improving reading abilities of high school pupils. It contains help for subject matter teachers, English teachers, and administrators.

Two workbooks made available recently by Gray, Monroe, and Artley are suitable for use in grades 7 to 12. These are *Basic Reading Skills for Junior High School Use* [18] and *Basic Reading Skills for High School Use* [19]. Each of these workbooks exists in a pupil's edition and a teacher's edition and provides a refresher program of reading skills for pupils not reading up to grade level.

Another recent workbook series for junior and senior high schools is Be a Better Reader, Books I–VI, by Nila Banton Smith [50]. This set of materials may serve as the basis of a developmental reading program in high school. It covers common reading skills and the reading skills of literature, social studies, science, and mathematics.

Among the earlier published workbooks is *Study Type of Reading Exercises* by Strang and others [53], which consists of work-type reading materials for senior high schools. A newer and more advanced book with the same title has been issued for the college level [54].

An extensive revision of an earlier workbook series is Reading for Meaning by Guiler and Coleman [20]. The last edition of this series consists of nine workbooks, one for each grade from 4 through 12. Each booklet contains twenty-four units, each consisting of a short passage, usually two or three paragraphs, followed by six types of questions relating respectively to getting word meanings, choosing the best title, getting the main idea, getting the facts, making an outline, and drawing conclusions. The questions are objective, and average scores for various grades are given in connection with each lesson. A new revision was in preparation at the time the present review was prepared.

A long-used series, Diagnostic Reading Workbooks by Eleanor M. Johnson and others [29] contains a workbook suitable for retarded readers in high school, as well as workbooks for the elementary grades. There is a set of achievement tests to be used with the workbooks. A more recent set of materials prepared by the same author is Modern Reading Skilltexts [28], a three-book

series for reading improvement of junior and senior high school pupils. This series is aimed at these reading-study skills: understanding ideas, interpreting ideas, organizing ideas, word analysis and dictionary skills, and understanding words.

Perhaps the longest used of all the workbooks in the field of reading is the series *Standard Test Lessons in Reading* by McCall and Crabbs [37], which was published in 1926 and revised in 1950. While the first four of these booklets, A, B, C, and D, are designed mainly for the elementary grades, Book E is planned for grades 7 to 12. Scores on the questions in the various lessons are translated into G scores or grade scores. The keeping by the pupils of graphic records of achievement on the lessons stimulates interest in their progress from day to day.

Other useful workbooks for the high school level include *Reading Skills* by Baker [3] and *New Adventures in Reading* by Leavell and Davis [34].

College. Several very useful manuals for college students have been prepared by reading specialists with experience at the college level. A manual that is well designed for the improvement of the basic reading skills is *Power and Speed in Reading* by Doris W. Gilbert [15]. It contains twelve selections which are designed for a course of twelve weeks involving twenty-four hours of instruction, although the plan is flexible. The reading selections and vocabulary exercises are well chosen. At intervals throughout the manual, there are reading tests, the results of which may be recorded on progress charts in the appendix. Although this manual is intended primarily as a guide for college students and adults, it should also be useful in developmental and corrective reading programs in secondary schools where the general level of scholastic aptitude is comparatively high.

Somewhat in contrast to the Gilbert manual, where the reading selections are fairly long, is the *College Reading Manual* by Shaw and Townsend [47], which contains 106 exercises, most of which are rather brief. The reading selections are similar to those found in college textbooks in English, science, and social studies. Questions at the end of each reading passage check the ability of the student to comprehend main ideas. For about half the exercises, check tests on the ability of the student to grasp details are also given.

A revision of Trigg's *Improve Your Reading* [58], which was one of the first manuals of remedial-reading exercises for college students, is available. This book is concerned with the following topics: "What Is Good Reading"; "Streamline Your Reading"; "Get Acquainted with Strange Words"; "To Understand What You Read, Think as You Read."

Another of the earlier college manuals still available is McCallister's *Purposeful Reading in College* [38], which is designed for use in English classes, orientation classes, and special reading classes.

Other promising workbooks or manuals for use by college students are *Improving Reading Ability*, second edition, by Stroud, Ammons, and Bamman [55]; *Toward Better Reading Skills*, second edition, by Cosper and Griffin [8]; *Better Reading in College* by Dallmann and Sheridan [12]; and *The Art of Efficient Reading* by Spache and Berg [51].

READING TEXTBOOKS AND TEXTBOOK SERIES

There is no clear dividing line between workbooks and textbooks which are designed as guides for high school and college students in improving their reading skill. In general, workbooks tend to be comparatively brief, to be oriented around a series of specific skills, to be issued in flexible covers, and to be consumable, although not all workbooks may be characterized in this way. On the whole, textbooks tend to be longer than workbooks, to contain more explanatory material to help the student understand the reading process, to be published in hard covers, and not to be consumable. Some textbooks, however, are published both in a hard-cover, permanent edition and in a soft-cover edition which may be used up by the student. A reading textbook is usually intended to meet the needs of reading classes that are set up as an integral part of the curriculum.

Secondary School. One of the first secondary school reading textbooks was *Following Printed Trails* by Carol Hovious [23]. This book was soon followed by a somewhat easier book, *Flying the Printways,* by the same author [24]. More recently, Miss Hovious has issued two other books, *New Trails in Reading* [25], which is designed for eighth-grade pupils and slow readers in high school, and *Wings for Reading* [26], which is intended for grade 6 and the junior high school. These four books form a series of reading textbooks for grades 6 to 12. They are written in a lively style designed to catch and hold the interests of pupils in this grade range.

A two-book series that has been used in junior and senior high schools for a good many years is *Develop Your Reading* [31] and *Read and Comprehend* [32] by Knight and Traxler. Each book contains two parts designed respectively to provide practice in extensive and intensive reading. The latter book is available in a revised edition and contains chapters on such questions as "How Much Fun Can You Find in Books?" "How Rapidly Do You Read?" "Do You Need Winged Words?" "Can You Get the Main Idea?" "Do You Believe All You Read?" and "How Shall We Read the Newspaper?" The last subject is dealt with more extensively in a book, *How to Read a Newspaper,* by Edgar Dale [11], which has been used in high schools for about twenty years.

Another of the earlier textbooks which has been revised in recent years is *Improving Your Reading* by Wilkinson and Brown [60]. This book is intended for pupils in the elementary grades and for those in the junior high school who are seriously retarded in reading. The first of the four parts contains a series of tests which are called experiments in reading; the second and third parts are devoted respectively to oral reading and silent reading; and the fourth part includes experiments or tests to show improvement.

Another reading textbook which has been used widely at the high school level for many years is *Experiences in Reading and Thinking* by Center and Persons [7]. This was formerly the easiest of a well-written, but comparatively difficult, three-book series of reading textbooks for the secondary school. The two more difficult books have been discontinued.

Two recently published reading textbooks for the high school are *Reading Skills* by Wood and Barrows [62] and *Better Reading* by Blair and Gerber [5].

The latter book provides an integrated program for developing student reading and writing abilities and appreciation of fiction, drama, and poetry.

One of the best-known series of books for use in improving the reading ability of junior and senior high school pupils is Let's Read by Murphy, Miller, and others [41]. In contrast to some reading textbooks which contain a large number of very short selections, the four books under the title Let's Read contain interesting stories and articles, each of which is several pages in length. The selections are followed by instructions to the students and by questions. The materials are well chosen to appeal to the interests of high school pupils. In case some other book is used as the basic text, the Let's Read series could well be employed for supplementary work or be placed on the list for free reading.

The Reading for Enjoyment series by Jewett and others [27] is a comparatively recent set of books for junior high school use. The three books in the series are *Adventure Bound* for grade 7, *Journeys into America* for grade 8, and *Literature for Life*, designed for grade 9. A workbook and a teacher's guide are available for each of the three titles.

The Mastery of Reading series by Bailey and Leavell [2] is also a rather recent textbook series, one that may be used in grades 7 to 12. This is an impressive series, with extensive material and good illustrations.

College and Adult. At the college level, an especially practical and helpful reading textbook is *Effective Reading and Learning* by Shaw [46]. This book is based on a course in reading taught in Brooklyn College. It is concerned with improving reading speed and versatility, reading college textbooks, reading assignments in various subjects, improving vocabulary, improving concentration, use of the dictionary, taking notes, and preparing for and taking tests.

Witty's *How to Become a Better Reader* [61] is a well-known guide for high school pupils, college students, and adults. Other books designed to help mature readers are *Improvement of College Reading* by Glock [17] and *Reading Improvement for Adults* by Leedy [35].

Triggs has published a new book, *Reading: Its Creative Teaching and Testing, Kindergarten through College* [59]. The first part is largely theoretical; the second part is in the nature of a teacher's manual on how to teach reading in the subject matter fields, how to determine the level of difficulty of reading material, and so forth. It is not intended that this book be placed in the hands of students, but it is mentioned here because it is designed as a guide for teachers in their day-to-day work with students at all levels.

MATERIALS FOR VOCABULARY BUILDING

A number of books and pamphlets containing useful vocabulary-teaching materials are available. One of the most interesting of these is *Building Your Vocabulary*, with revisions, by Gilmartin [16]. This is a rather mature book, suitable for use in senior high school and college. The book challenges the student in the very beginning with "Sixty Snags in Pronunciation" and then takes up a variety of procedures for improving vocabulary. It maintains a flexible organization through the use of short units. Vocabulary tests and quizzes are included.

An easier book, one designed for remedial reading classes at the high school level, is *Word Attack: A Way to Better Reading* by Clyde Roberts [43].

An interesting vocabulary textbook that has been available for some twenty years is *Twelve Ways to Build a Vocabulary* by Archibald Hart [21]. Designed for use in high school and college, this little book contains twelve chapters, some of which carry such intriguing titles as "Weary Words," "The Poison Well," "Malapropisms or What Did She Mean?" and "Fun with the Dictionary."

A somewhat easier book by Hart and Lejeune, *The Growing Vocabulary* [22], is intended for pupils twelve to sixteen years of age, and uses a word list based on the *Thorndike-Century Junior Dictionary*.

Secondary schools attempting to correlate instruction in reading with the teaching of spelling may be interested in two books in this area. One of these is a *Vocabulary-building Speller* by Meyer [39]. Spelling lists are accompanied by definitions and illustrations of the use of the words, and most of the words are repeated several times in the definitions of other words. The other book is *Spelling and Word Power* by Malsbary [36]. It includes units on basic words, everyday business words, advanced words, and study helps, and special vocabularies of various fields. It is accompanied by a workbook.

STUDY—HABITS WORKBOOKS AND GUIDES

Closely related to reading textbooks and workbooks are certain workbooks and aids in the field of study habits. Perhaps the workbook for training in study habits in the secondary school which has been longest in use is *Better Work Habits* by Salisbury [45]. This book contains many detailed practice exercises on a variety of work and study skills. It is planned especially for the ninth grade, but it may be used in the senior high school as well.

A considerable proportion of the workbooks and manuals planned to help students improve their study procedures are designed for the college level. One of the best known of these is *Effective Study* by Robinson [44]. This workbook was originally developed in how-to-study programs with college freshmen, but it could be used with students in the upper years of high school. An admirable feature of the book is close coordination between diagnostic tests and remedial materials.

Other manuals for improving the study habits of college students are *Learning More Effective Study* by Bird and Bird [4] and *A Guide to College Study* by Frederick, Kitchen, and McElwee [14].

A second type of booklet designed to help pupils study better consists not of practice exercises primarily, but of a series of practical suggestions concerning methods of study in different fields. *Improvement of Study Habits* by Edward S. Jones [30] is a booklet containing helpful suggestions for the senior high school or college student. Among the aspects of study discussed are reading, note taking, improving one's memory, use of the library, the habit of concentration, reading in mathematics and science, mental hygiene, and preparing for and taking examinations.

A newer study guide, written primarily for the college student, is *How to Study* by Morgan and Deese [40]. This booklet contains many valuable suggestions and some practice exercises. Among the topics taken up in detail are

successful studying, getting work done, reading better and faster, taking notes, taking examinations, studying foreign languages, and mathematical problems.

Teaching Study Habits and Skills by Ralph C. Preston [42] is a practical guide for teachers in helping pupils develop interest in learning, self-discipline, skill in gathering information, and mastery of content from the preschool to the college level.

MATERIALS FOR USE WITH READING FILMS

Although avoidance of overemphasis on the mechanical aspects of training in reading is highly desirable, some schools may feel a need for materials that will furnish guidance in the use of reading films as one aspect of a reading-improvement program. The *C-B Reading Program* [6] provides a manual for use with the C-B films, which are designed for use in a developmental reading program from the middle grades through college.

An instructor's manual is available for the *Advanced Reading Program* [1], produced by the Perceptual Development Laboratories. The manual serves as a guide for the use of the Perceptoscope, a specially designed 16-mm projector which combines the functions of tachistoscopes, motion-picture projectors, and reading pacers. It outlines an advance reading course of 24 one-hour sessions.

Controlled Reader Techniques by Taylor and Frackenpohl [56] provides a brief history of controlled reading, states principles of training, and presents a series of lesson plans for daily use, including principles for use of material for the high school and college. Another manual by the same authors, *Tech-x Techniques* [57], outlines the history, nature, and principles of tachistoscopic training and presents a series of daily programs, including a program for secondary schools and colleges.

Some of the techniques discussed in the foregoing manuals are probably more appropriate for use in reading centers and clinics than in classrooms. Schools needing to refer pupils who are seriously retarded in reading to clinics or service centers outside the school system may be interested in the comprehensive *Directory of Reading Clinics*, prepared recently by the Educational Developmental Laboratories [13].

BOOKS FOR FREE READING

There is an ever-present need for easy, interesting material for seriously retarded readers in high school. A bibliography for adolescents who find reading difficult is available in a revised edition by Strang, Phelps, and Withrow [52]. This bibliography, *Gateways to Readable Books*, includes many titles of about fifth-, sixth-, and seventh-grade levels of difficulty.

A pamphlet called *Individualized Reading* by May Lazar [33] contains a book list for an individualized reading program arranged by grade level and subject. This organized book list is helpful, although it is limited to the books of just one publisher.

The Independent Schools Education Board (ISEB) publishes annually, for pupils of average and superior ability, the *Junior Book List* and *Senior Book List* [9, 10], which are very useful. The *Junior Book List* is primarily for ele-

mentary school pupils, but it devotes several pages to an annotated list of books appropriate for pupils in grades 6 to 9. The *Senior Book List* provides an annotated list of books for students in the last four years of secondary school, arranged according to novels; short stories, poetry, and drama; people; places; ideas; the arts; the world today; history; hobbies, sports, and vocations; science; and reference works. Titles of books chosen to receive the annual award made by the ISEB for the ten best adult books for the precollege reader are starred in the list.

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